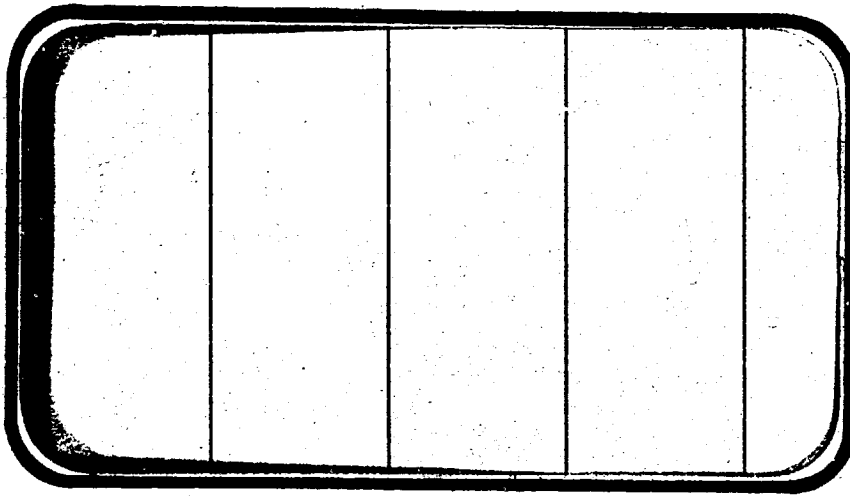


NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

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CONCLUSIONS

April, 1974

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INVESTIGATIONS OF THE SPACE SHUTTLE ORBITER
2A CONFIGURATION 0.015-SCALE MODEL IN THE
NASA AMES RESEARCH CENTER 3.5-FOOT HYPER-
SONIC WIND TUNNEL AT MACH NUMBERS 5, 7 AND 10
(OAL1B)

By

J. A. Mellenthin; J. Cleary, NASA Ames
M. E. Nichols; M. D. Milam, Rockwell International

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL SPECIFICS:

Test Number: ARC 3.5-160
NASA Series No: OAL1B
Test Date: 14 May - 25 May 1973

FACILITY COORDINATOR:

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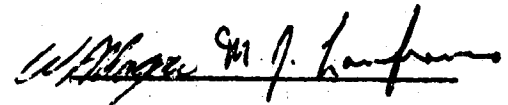
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Liaison Operations

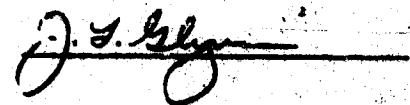


B. W. Myers
Data Operations



This document has been reviewed and is approved for release.

 N. D. Kemp
Data Management Services



Chrysler Corporation Space Division assumes no responsibility for the data presented other than display characteristics.

INVESTIGATIONS OF THE SPACE SHUTTLE ORBITER
2A CONFIGURATION 0.015-SCALE MODEL IN THE
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(OAL1B)

By
J. A. Mellenthin; J. Cleary, NASA Ames
M. E. Nichols; M. D. Milam, Rockwell International

ABSTRACT

This report presents the results of a wind tunnel test conducted in the Ames Research Center's 3.5-Foot Hypersonic Wind Tunnel from 14 to 25 May 1973 to determine the force, moment, and hinge-moment characteristics of the Configuration 2A Space Shuttle Vehicle Orbiter at Mach numbers 5, 7 and 10. The model was an 0.015-scale representation of the Orbiter Configuration 2A used in test OALLA and later tests.

Six-component aerodynamic force and moment data were recorded from a 1.50-inch internal strain-gage balance, and base-pressures were taken for axial and drag force corrections. Hinge-moment data were obtained for the rudder and the inboard and outboard elevon panels of the starboard wing.

Large thermal-gradient effects were observed in the hinge-moment data, requiring special in-house treatment. Therefore, these data are not presented in plotted form.

Pitch-sweep ranges of from -3° to $+53^{\circ}$ were attained, with yaw angles of 0° and 5° . No yaw-sweeps were carried out during this test.

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TABLE OF CONTENTS

	Page
ABSTRACT	iii
INDEX OF MODEL FIGURES	2
INDEX OF DATA FIGURES	3
NOMENCLATURE	7
CONFIGURATIONS INVESTIGATED	12
TEST FACILITY DESCRIPTION	13
DATA REDUCTION	14
TABLES	
1. TEST CONDITIONS	16
2. DATA SET/RUN NUMBER COLLATION SUMMARY	17
3. MODEL DIMENSIONAL DATA	21
MODEL FIGURES	33
DATA FIGURES	43
APPENDIX-TABULATED SOURCE DATA	

INDEX OF MODEL FIGURES

Figure		Page
1	Axis Systems.	33
2	SSV Orbiter 2A Configuration Baseline.	34
3	Model installation photographs and shadowgraphs.	
(a)	Photograph, top view.	35
(b)	Photograph, close-up showing base pressure instrumentation.	36
(c)	Side view.	37
(d)	$M = 7.3, \alpha = 9.5^\circ, \beta = 0^\circ, \delta_{e_L} = \delta_{e_R} = 10^\circ, \delta_{SB} = 54.92^\circ$ $\delta_{BF} = 13.75^\circ, \delta_r = 0^\circ.$	38
(e)	$M = 7.3, \alpha = 23.5^\circ, \beta = 0^\circ, \delta_{e_L} = \delta_{e_R} = 10^\circ, \delta_{SB} = 54.92^\circ$ $\delta_{BF} = 13.75^\circ, \delta_r = 0^\circ.$	39
(f)	$M = 7.3, \alpha = 0^\circ, \beta = 0^\circ, \delta_{e_L} = \delta_{e_R} = 0^\circ, \delta_{SB} = 54.92^\circ,$ $\delta_{BF} = 13.75^\circ, \delta_r = 0^\circ.$	40
(g)	$M = 7.3, \alpha = 0^\circ, \beta = 0^\circ, \delta_{e_L} = \delta_{e_R} = 0^\circ, \delta_{SB} = 54.92^\circ,$ $\delta_{BF} = 0^\circ, \delta_r = 0^\circ.$	41
(h)	$M = 7.3, \alpha = 22.5^\circ, \beta = 0^\circ, \delta_{e_L} = \delta_{e_R} = 0^\circ, \delta_{SB} = 54.92^\circ$ $\delta_{BF} = 0^\circ, \delta_r = 0^\circ.$	42

INDEX OF DATA FIGURES

FIGURE NUMBER	TITLE	COEFFICIENTS SCHEDULE	VARYING PARAMETERS	PAGE NUMBER
Fig. 1.A	Mach 7.32 Component Buildup	A	Configuration	1-11
Fig. 1.B	Mach 7.32 Baseline Character- istics	A		12-22
Fig. 2.A.1	Mach 5.26 Undeflected Elevon Effects	A		23-33
Fig. 2.A.2	Mach 7.32 Undeflected Elevon Effects	A		34-44
Fig. 2.A.3	Mach 10.29 Undeflected Elevon Effects	A		45-55
Fig. 2.B.1	Mach 5.26 -40 Degree Elevon Effects	A		56-66
Fig. 2.B.2	Mach 7.32 -40 Degree Elevon Effects	A		67-77
Fig. 2.B.3	Mach 10.29 -40 Degree Elevon Effects	A		78-88
Fig. 2.C.1	Mach 5.26, 10 Degree Elevon Effects	A		89-99
Fig. 2.C.2	Mach 7.32, 10 Degree Elevon Effects	A		100-110

INDEX OF DATA FIGURES (Continued)

FIGURE NUMBER	TITLE	COEFFICIENTS SCHEDULE	VARYING PARAMETERS	PAGE NUMBER
Fig. 2.C.3	Mach 10.29, 10 Degree Elevon Effects	A		111-121
Fig. 2.D	Incremental Elevon Effects	B	DELEVN, DELBDF	122-136
Fig. 2.E	Incremental Elevon Effects With Mach Number	C		137-196
Fig. 3.A	Effects of Sideslip With Angle of Attack	D		197-205
Fig. 3.B	Derivative Effects of Sideslip With Angle of Attack	E		206-214
Fig. 3.C	Derivative Effects of Sideslip With Mach Number	F		215-226
Fig. 4.A.1	Mach 5.26 -14.25 Degree Body Flap Effects	A		227-237
Fig. 4.A.2	Mach 7.32 -14.25 Degree Body Flap Effects	A		238-248
Fig. 4.A.3	Mach 10.29 -14.25 Degree Body Flap Effects	A		249-259
Fig. 4.B.1	Mach 5.26 Undeflected Body Flap Effects	A		260-270
Fig. 4.B.2	Mach 7.32 Undeflected Body Flap Effects	A		271-281

INDEX OF DATA FIGURES (Continued)

FIGURE NUMBER	TITLE	COEFFICIENTS SCHEDULE	VARYING PARAMETERS	PAGE NUMBER
Fig. 4.B.3	Mach 10.29 Undelected Body Flap Effects	A		282-292
Fig. 4.C.1	Mach 5.26, 13.75 Degree Body Flap Effects	A		293-303
Fig. 4.C.2	Mach 7.32, 13.75 Degree Body Flap Effects	A		304-314
Fig. 4.C.3	Mach 10.29, 13.75 Degree Body Flap Effects	A		315-325
Fig. 4.D.1	Mach 5.26 Incremental Body Flap Effects	B, G	DELDF, ALPHA	326-348
Fig. 4.D.2	Mach 7.32 Incremental Body Flap Effects	B, G	DELDF, ALPHA	349-371
Fig. 4.D.3	Mach 10.29 Incremental Body Flap Effects	B, G	DELDF, ALPHA	372-388
Fig. 4.E	Incremental Body Flap Effects With Mach Number	H	DELDF	389-408
Fig. 5.A	Effect of Rudder Deflection	D	RUDDER	409-411
Fig. 5.B	Derivative Effects of Rudder Control	I		412-414
Fig. 6.A	Effect of Speedbrake Deflection	A, D	SPDRK	415-428

INDEX OF DATA FIGURES (Concluded)

FIGURE NUMBER	TITLE	COEFFICIENTS SCHEDULE	VARYING PARAMETERS	PAGE NUMBER
Fig. 6.B	Incremental Effects of Speed-brake on Rudder Effectiveness	B	DELSBK	429-433
Fig. 7.A	Lateral-Directional Effects of Aileron Control	D	ELEVON	434-436
Fig. 7.B	Lateral-Directional Derivative Effects of Aileron Control	J		437-439
Fig. 8	Baseline - Vs. - Symmetrical Wing Study	A		440-450

COEFFICIENTS SCHEDULE:

A: CL, CN, CDF, CD, CAB, CAF, CA, C1MFWD, C1MAFT, XCP/L, L/D vs. ALPHA
CL, CN vs. C1MFWD, CL vs. CD

B: DCL, DCN, DCDF, DCD, DCAB, DCAF, DCA, DCLMFD, DCLMAF vs. ALPHA

C: DCL, DCDF, DCD, DCAB, DCAF, DCA, DCLMFD, DCLMAF, DCN vs. MACH

D: CY, CLN, CSL vs. ALPHA

E: DCY/DB, DCLNDB, DCSLDB vs. ALPHA

F: DCY/DB, DCLNDB, DCSLDB vs. MACH

G: DCL, DCN, DCD, DCA, DCLMAF, DCLMFD vs. DELBDF

H: DCL, DCD, DCDF, DCAB, DCAF, DCA, DCLMAF, DCLMFD, DCN vs. MACH

I: DCY/DR, DCLNDR, DCSLDR vs. ALPHA

J: DCY/DA, DCLNDA, DCSLDA vs. ALPHA

NOMENCLATURE
General

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_1 - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2 , psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3 , slugs/ft ³

Reference & C.G. Definitions

A_b		base area; m^2 , ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
\bar{L}_{REF} \bar{c}	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2 , ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream

NOMENCLATURE (Continued)

Body-Axis System

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

Stability-Axis System

C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

NOMENCLATURE (Continued)

ADDITIONS TO STANDARD NOMENCLATURE

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DESCRIPTION</u>
$(C_H)_e$		elevon hinge moment coefficient
$(C_H)_r$		rudder hinge moment coefficient
$C_{m_{aft}}$	CLMAFT	pitching moment coefficient about aft CG
$C_{m_{fwd}}$	CLMFWD	pitching moment coefficient about forward CG
$C_{l_{\beta}}$	DCSLDB	rolling moment sideslip derivative; per degree
$C_{l_{\delta_a}}$	DCSLDA	rolling moment aileron derivative; per degree
$C_{l_{\delta_r}}$	DCSLDR	rolling moment rudder derivative; per degree
$C_{n_{\beta}}$	DCLNDB	yawing moment sideslip derivative; per degree
$C_{n_{\delta_a}}$	DCLNDA	yawing moment aileron derivative; per degree
$C_{n_{\delta_r}}$	DCLNDR	yawing moment rudder derivative; per degree
$C_{Y_{\beta}}$	DCY/DB	side force sideslip derivative; per degree
$C_{Y_{\delta_a}}$	DCY/DA	side force aileron derivative; per degree
$C_{Y_{\delta_r}}$	DCY/LR	side force rudder derivative; per degree
XCP/ l	XCP/L	longitudinal center of pressure location; fraction of body length

NOMENCLATURE (Continued)

ΔC_A	DCA	incremental axial-force coefficient
ΔC_{A_b}	DCAB	incremental base axial-force coefficient
ΔC_{A_f}	DCAF	incremental forebody axial-force coefficient
ΔC_D	DCD	incremental drag coefficient
ΔC_{D_f}	DCDF	incremental forebody drag coefficient
ΔC_L	DCL	incremental lift coefficient
$\Delta C_{m_{aft}}$	DCLMAF	incremental pitching-moment coefficient about aft CG
$\Delta C_{m_{fwd}}$	DCLMFD	incremental pitching moment coefficient about forward CG
ΔC_N	DCN	incremental normal-force coefficient

Surface Definitions

δ_e	ELEVTR	elevator, surface deflection angle, positive deflection trailing edge down; degrees
δ_{BF}	BDFLAP	body flap, surface deflection angle, positive deflection trailing edge down; degrees
δ_r	RUDDER	rudder, surface deflection angle, positive deflection trailing edge to the left; degrees
δ_{SB}	SPDBRK	speed brake, split rudder deflection angle, left split rudder trailing edge left and right split rudder trailing edge right, $\delta_{SB} = (\delta_{rL} + \delta_{rR})/2$, positive deflection; degrees
δ_{eL}	ELVN-L	left elevon, surface deflection angle, positive deflection, trailing edge down; degrees
δ_{eR}	ELVN-R	right elevon, surface deflection angle, positive deflection, trailing edge down; degrees
δ_e	ELEVON	elevon, surface deflection angle, positive deflection, trailing edge down; degrees

NOMENCLATURE (Concluded)

$\Delta\delta_e$	DELEVN	algebraic difference of elevon deflection angle between two runs; degrees
$\Delta\delta_{SB}$	DELSBK	algebraic difference of speed brake deflection angle between two runs; degrees
$\Delta\delta_{BF}$	DELBDF	algebraic difference of body flap deflection angle between two runs; degrees

CONFIGURATIONS INVESTIGATED

The test specimen was an 0.015 scale model of the Rockwell International SSV Orbiter Configuration 2A. Model configuration components and variables were as follows:

<u>Component</u>	<u>Definition</u>
B_{10}	Basic 2A fuselage of the Rockwell International SSV Orbiter Configuration (VL70-000092A, VL70-000093, VL70-000094)
C_5	Basic 2A canopy (VL70-000092A)
D_7	Basic 2A manipulator-arm housing (VL70-000093)
F_4	Basic 2A body flap (VL70-000094), deflections tested were $\delta_{BF} = 0^\circ, -14.25^\circ$ and 13.75°
W_{87}	Basic 2A wing (VL70-000093)
W_{88}	Symmetrical wing
E_{18}	Elevon on basic 2A wing (VL70-000093); deflections tested were $\delta_e = 0, \pm 5, +10, -15, -25, -40$
M_3	Basic OMS-RCS pod for the Rockwell International SSV 2A Configuration (VL70-000094)
V_5	Basic 2A vertical tail (VL70-000095)
R_5	Basic rudder for vertical tail (VL70-000095), deflections tested were $\delta_r = 0, -10, -20, \delta_{SB} = 0, 24.92, 54.92$
N_8	Basic 2A OMS engine nozzle (VL70-008306)

Table 3 provides a complete description of these components. A sketch of configuration 2A is given in figure 2.

TEST FACILITY DESCRIPTION

The NASA-Ames 3.5-Foot Hypersonic Wind Tunnel is a closed-circuit, blowdown-type tunnel capable of operating at nominal Mach numbers of 5, 7, and 10 at pressures to 1800 psia and temperatures to 3400°R for run times to four minutes. The major components of the facility include a gas storage system where the test gas is stored at 3000 psi, a storage heater filled with aluminum-oxide pebbles capable of heating the test gas to 3400°R, axisymmetric contoured nozzles with exit diameters of 42 inches for generating the desired Mach number, and a 900,000 ft³ vacuum storage system which operates to pressures of 0.3 psia. The test section itself is an open-jet type enclosed within a chamber approximately 12-feet in diameter and 40-feet in length, arranged transversally to the flow direction.

A model support system is provided that can pitch models through an angle-of-attack range of -20 to +18 degrees, in a vertical plane, about a fixed point of rotation on the tunnel centerline. This rotation point is adjustable from 1 to 5 feet from the nozzle exit plane. The model normally is out of the test stream (strut centerline 37-inches from tunnel centerline) until the tunnel test conditions are established after which it is inserted. Insertion time is adjustable to as little as 1/2 second and models may be inserted at any strut angle.

A high-speed, analog to-digital data acquisition system is used to record test data on magnetic tape. The present system is equipped to measure and record the outputs from 80 transducers in addition to 20 channels of tunnel parameters.

DATA REDUCTION

Six component balance-measured force and moment data were reduced about both stability and body axes as shown in figure 1. Moment reference points representing both a forward and aft CG boundary were selected for plotted longitudinal data. Tabulated data are reduced only about the forward CG location (Appendix). Base pressure measurements were averaged and applied to the model base area to compute model base axial force for use in analysis of scale effects. Total, forebody and base axial force and drag coefficients are presented as data.

Hinge moment data were reduced to coefficient form and are tabulated in the Appendix. Thermal effects on the hinge moment balances effected their output requiring a complex correction to be applied to resulting hinge moment data. This correction was not easily amenable for bulk application to the data and has therefore not been applied to tabulated data in the Appendix. No hinge moment data are presented in the plots for this reason. Details of the required hinge moment correction are available from the Rockwell International - Space Division on request.

The following reference dimensions were used in data reduction:

<u>Reference Item</u>	<u>Value full scale</u>	<u>Description</u>
Area	2690 ft. ²	wing theoretical planform area
Length(longitudinal)	474.81 in.	wing theoretical M.A.C.
Length (lateral)	936.68 in.	wing span

XMRP:

forward	876.68 in.aft of nose	66% l_B
Aft	903.24 in.aft of nose	68% l_B
l_B	1328.3 in.	body length
A_b	456.40 in. ²	base area

Rudder hinge moment:

Area	98.37 ft. ²	rudder planform area
Length	74.40 in.	rudder M.A.C.

Elevon hinge moment:

Area	205.517 ft. ²	elevon planform area
Length	90.67 in.	elevon M.A.C.

TABLE 1.

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TABLE 2.

TEST: Ames 3.5-160										DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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α OR β SCHEDULES
 α E = 3.0, 3.6, 9
 α N = 23, 26, 29, 33, 31, 42, 47, 50
 α F = 9, 13, 16, 19, 23
 α L = 23, 26, 29, 33, 37, 43, 46, 52
 α C = 3, 0, 3, 6, 9, 13, 17, 20, 23
 COEFFICIENTS
 IDVAR (1) IDVAR (2) NDV

TABLE 2. - Continued.

TEST: Ames 3.5-160										DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :	
DATA SET IDENTIFIER		CONFIGURATION		SCHD.		PARAMETERS/VALUES										NO. OF RUNS		MACH NUMBERS			
		A	B	S ₁	S ₂	S ₃	S ₄	S ₅	S ₆	S ₇	S ₈	S ₉	S ₁₀			53	73	101			
ABD1014	B ₁ B ₂ C ₃ D ₄ M ₅ N ₆ W ₇ X ₈ Y ₉ Z ₁₀	C	O	O	O	O	O	54.92	O												
33		L	T	O	O	T	T	O									14	33			
15		C		5	-15			14.25									15	16			
16		A		-5	-15			T									28	17			
28		B		-5	-15												27	29			
17		A		15	-25												30	18			
27		B		15	-25												26	19			
29		L		5	-5												25	20			
30		L		5	-5												24	21			
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TEST RUN NUMBERS

OR

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OR B
SCHEDULES
αC = 30, 36, 42, 48, 54
αD = 23, 26, 29, 33, 36, 42, 46, 50

COEFFICIENTS
αA = 30, 36, 42, 48, 54
αB = 27, 31, 35, 37, 40, 43, 46, 53

IDVAR (1)
IDVAR (2)
NDV

19

TEST : Pass 35-160

DATE : _____

DATA SET / RUN NUMBER COLLATION SUMMARY

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OK RUNS	MACH NUMBERS			TEST RUN NUMBERS
		A	B	S ₁	S ₂	S ₃	S ₄	S ₅	S ₆	S ₇	S ₈	S ₉	S ₁₀		53	723	101	
PR0035	B K C D M N W F ₁₀ K ₂	G	5	0	0	0	0	54.22	-14.25						53	723	101	
45		G	5	T	T	T	T	T	T									35
44		J	5	T	T	T	T	T	T									45
36		G	0	T	T	T	T	T	T									44
43		J	T	T	T	T	T	T	T									36
37		G	T	T	T	T	T	T	T									43
38		G	T	T	T	T	T	T	T									37
39		G	T	10	10	10	10	10	10									38
42		J	T	10	10	10	10	10	10									39
40		G	T	-40	-40	-40	-40	-40	-40									42
41		J	T	-40	-40	-40	-40	-40	-40									40
46		N	5	0	0	0	0	0	0						46			41
47		L	0	T	T	T	T	T	T						47			
50		C	T	T	T	T	T	T	T						50			
67		S	T	T	T	T	T	T	T						67			
68		X	T	T	T	T	T	T	T						68			
69		X	T	T	T	T	T	T	T						69			
48		B	T	-40	-40	-40	-40	-40	-40						48			

75.76676155494337312519137

IDVAR (1)IDVAR (2)NDV

Q₁ = 23.26, 27.33, 32.41

Q₂ = 23.26, 27.33, 32.41

Q₃ = 23.26, 27.33, 32.41

Q₁ = 23.26, 27.33, 32.41

Q₂ = 23.26, 27.33, 32.41

Q₃ = 23.26, 27.33, 32.41

TABLE 2. - Concluded.

TEST : Ames 3-5-460

DATE :

DATA SET / RUN NUMBER COLLATION SUMMARY

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES										NO. OF RUNS	MACH NUMBERS	
		α	β	S _α	S _β	S _α	S _β	S _α	S _β	S _α	S _β	S _α	S _β			
RBX066	B ₂ C ₂ D ₂ M ₂ N ₂ F ₂ K ₂ R ₂	A	0	-40	-40	0	54.92	-14.75						5.3	7.3	10
65		A	T	10	10	T	T	23.75						66		
63		L		0	0	T	T	0						65		
64		L		T	T	T	T	14.75						63		
56	B ₂ C ₂ D ₂ M ₂ N ₂ F ₂ K ₂ R ₂	L		T	T	T	T	-14.75						64		
61		C		T	T	T	T	T						56		
57	B ₂ C ₂ D ₂ M ₂ N ₂ F ₂ K ₂ R ₂	L		-	-	-	-	-						61		
60		C		-	-	-	-	-						57		
58	B ₂ C ₂ D ₂ M ₂ N ₂ F ₂ K ₂ R ₂	L		0	0	0	54.92							60		
59		C		T	T	T	T	T						58		
62	B ₂ C ₂ D ₂ M ₂ N ₂ F ₂ K ₂ R ₂	L		T	T	T	T	T						59		
														62		
						</										

TABLE 3. - MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B10

GENERAL DESCRIPTION : DOUBLE DELTA WING FUSELAGE PER LINES VL70-000093, WITH

57.0 IN. RADIUS NOSE

2A CONFIGURATION 1A WT ORBITER

SCALE MODEL = .015 (18-0)

DRAWING NUMBER : VL72-000061 VL70-000093

DIMENSIONS :

FULL SCALE

MODEL SCALE

Length ~ in.	<u>1328.3</u>	<u>19.924</u>
Max. Width ~ in. (@ $X_0 = 1528.3$)	<u>265.0</u>	<u>3.975</u>
Max. Depth ~ in. (@ $X_0 = 1480.52$)	<u>248.0</u>	<u>3.720</u>
Fineness Ratio	<u>5.012</u>	<u>5.012</u>
Area ~ ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u>456.40</u>	<u>0.1027</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : CANOPY - C₅

GENERAL DESCRIPTION : 2A CONFIGURATION PER LINES VL70-000092.

SCALE MODEL = 0.015

DRAWING NUMBER : VL70-000092

DIMENSIONS :

	FULL SCALE	MODEL SCALE
Sta. Fwd. Bulkhead, in.	<u>391.00</u>	<u>5.865</u>
Sta. T. E., in.	<u>560.0</u>	<u>8.400</u>
Canopy Intersects Body ML, in.	<u>391.00</u>	<u>5.865</u>
Fineness Ratio	<u> </u>	<u> </u>
Area	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

No info on view angles

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : MANIPULATOR HOUSING - D₇
 GENERAL DESCRIPTION : 2A CONFIGURATION, LIGHT WT ORBITER PER LINES

 SCALE MODEL = 0.015

 DRAWING NUMBER : VL70-000093

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - IN.	<u>881.00</u>	<u>13.215</u>
Max. Width - IN.	<u>51.00</u>	<u>0.765</u>
Max. Depth - IN.	<u>23.00</u>	<u>0.345</u>
Fineness Ratio	<u> </u>	<u> </u>
Area	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Ⓔ Fuselage, BP = 0.0 INFS
 WP = 500.0 INFS
 X₀ 426.0 to 1307.0 INFS

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: WING - V₈₇ NEW LIGHTWEIGHT ORBITERGENERAL DESCRIPTION: Orbiter Configuration per Lines VL70-000093.NOTE: (Dihedral angle is defined at the lower surface of the wing at the 75.33%
element line projected into a plane perpendicular to the FRL.)SCALE MODEL ≈ 0.015

TEST NO. _____

DWG. NO. VL70-000093DIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATAArea(Theo.) ~ Ft²

2690.00

0.605

Planform

Wetted

236.68

14.05

Span(Theo) In.

2.265

2.265

Aspect Ratio

1.177

1.177

Rate of Taper

0.200

0.200

Taper Ratio

3.500

3.500

Dihedral Angle, degrees

3.000

3.000

Incidence Angle, degrees

+3.000

+3.000

Aerodynamic Twist, degrees

Toe-In Angle

Cant Angle

Sweep Back Angles, degrees

45.000

45.000

Leading Edge

-10.24

-10.24

Trailing Edge

35.209

35.209

0.25 Element Line

Chords: - in.

689.24

10.339

Root (Theo) B.P.O.O.

137.85

2.068

Tip, (Theo) B.P.

474.81

7.122

MAC

1136.89

17.053

Fus. Sta. of .25 MAC

W.P. of .25 MAC

299.20

4.488

B.L. of .25 MAC

182.13

2.732

Airfoil Section

Root

Tip

EXPOSED DATAArea(Theo) ~ Ft²

1752.29

0.394

Span, (Theo) ~ In. BP108 to 468.341

720.68

10.810

Aspect Ratio

2.058

2.058

Taper Ratio

0.2451

0.2451

Chords

562.40

8.436

Root BP108

Tip 1.00b

137.85

2.068

MAC ²

303.03

5.895

Fus. Sta. of .25 MAC

1185.31

17.779

W.P. of .25 MAC

300.20

4.503

B.L. of .25 MAC

143.76

2.156

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: WING - W87 NEW LIGHTWEIGHT ORBITER (Continued.)

Airfoil Section (Rockwell Mod NASA)		
XXXX-64		
Root $\frac{b}{2} = 0.425$	<u>0.10</u>	<u>0.10</u>
Tip $\frac{b}{2} = 1.00$	<u>0.12</u>	<u>0.12</u>
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area - Ft ²	<u>120.33</u>	<u>0.0271</u>
Leading Edge Intersects Fus M. L. @ Sta	<u>560.0</u>	<u>8.400</u>
Leading Edge Intersects Wing @ Sta	<u>1035.0</u>	<u>15.525</u>

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: Wing - W₈₈

GENERAL DESCRIPTION: _____

Same as W₈₇ except has

symmetrical airfoil

DRAWING NUMBER: _____

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area

Planform

Wetted

Span (equivalent)

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, degrees

Incidence Angle, degrees

Aerodynamic Twist, degrees

Toe-In Angle

Cant Angle

Sweep Lack Angles, degrees

Leading Edge

Trailing Edge

0.25 Element Line

Chords:

Root (Wing Sta. 0.0)

Tip, (equivalent)

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section

Root

Tip

EXPOSED DATA

Area

Span, (equivalent)

Aspect Ratio

Taper Ratio

Chords

Root

Tip

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON E-18

GENERAL DESCRIPTION: 2A CONFIGURATION PER W-87, LINES VL70-000093

DATA FOR (1) OF (2) SIDES

MODEL SCALE = 0.015

DRAWING NUMBER: VL70-000093

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - ft ²	<u>205.517</u>	<u>0.046</u>
Span (equivalent) - in.	<u>353.34</u>	<u>5.300</u>
Inb'd equivalent chord (B.P. 115.0 in.), in.	<u>114.78</u>	<u>1.722</u>
Outb'd equivalent chord (B.P. 468.3 in.), in.	<u>55.00</u>	<u>0.825</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>.208</u>	<u>.208</u>
At Outb'd equiv. chord	<u>.400</u>	<u>.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>-10.02</u>	<u>-10.02</u>
Hingeline	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hinge line)- ft ³	<u>1548.07</u>	<u>0.005</u>
Product of Area Moment		

NOTE: The elevon panel consists of an inboard and outboard segment. The split line dividing the segments is at B.P. 281 inches full scale (B.P. 4.215 inches Model Scale).

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : OMS PODS - M₃

GENERAL DESCRIPTION : 2A LIGHT WT CONFIGURATION PER MC120074.
PER LINES VL70-000094.

SCALE MODEL = 0.015

DRAWING NUMBER : VL70-000094

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - in.	<u>346.0</u>	<u>5.190</u>
Max. Width - in. @ X ₀ = 1450.0	<u>108.0</u>	<u>1.620</u>
Max. Depth - in. @ X ₀ = 1500.0	<u>113.8</u>	<u>1.707</u>
Fineness Ratio	<u> </u>	<u> </u>
Area	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

E OF OMS POD

Z₀ = 463.9 INCHES FS; WP 400.0 + 63.9 = 463.9 INFS
 6.000 + .959 = 6.959 INMS

Y₀ = 80.0 INFS, 1.20 INMS

FROM FUSELAGE STATION 1214.0 to 1560 INFS = 346.0 INFS
 18.210 to 23.40 INMS = 5.190 INMS

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V5 (Lightweight Orbiter Configuration)GENERAL DESCRIPTION: Centerline vertical tail, double wedge airfoil with rounded leading edge.

SCALE MODEL = 0.015

DRAWING NUMBER:

VL70-000095DIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATAArea (Theo) - Ft²
Planform413.25.0929

Span (Theo) - In.

315.724.735

Aspect Ratio

1.6751.675

Rate of Taper

0.5070.507

Taper Ratio

0.4040.404

Dihedral Angle, degrees

Incidence Angle, degrees

Aerodynamic Twist, degrees

Toe-In Angle

Cant Angle

Sweep Back Angles, degrees

Leading Edge

45.00045.000

Trailing Edge

26.24926.249

0.25 Element Line

41.13041.130

Chords: - in.

Root (Theo) WP

268.504.0275

Tip, (Theo) WP

108.471.627

MAC

199.812.997

Fus. Sta. of .25 MAC

1463.5021.952

W.P. of .25 MAC

635.5229.533

B.L. of .25 MAC

0.000.00

Airfoil Section

Leading Wedge Angle Deg

10.00010.000

Trailing Wedge Angle Deg

14.92014.920

Leading Edge Radius

2.002.000Void Area - ft²13.170.0030

Blanketed Area

12.670.0028

TABLE 3 - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : RUDDER R5

GENERAL DESCRIPTION : 2A CONFIGURATION PER LINES VL70-000095

SCALE MODEL = 0.015

DRAWING NUMBER : _____

DIMENSIONS :	FULL SCALE	MODEL SCALE
Area ~ ft ²	<u>98.37</u>	<u>0.022</u>
Span (equivalent) ~ in.	<u>201.0</u>	<u>3.015</u>
Inb'd equivalent chord ~ in.	<u>91.585</u>	<u>1.374</u>
Outb'd equivalent chord ~ in.	<u>50.833</u>	<u>0.762</u>
Ratio movable surface chord/ total surface chord	<u> </u>	<u> </u>
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees	<u> </u>	<u> </u>
Leading Edge	<u>34.83</u>	<u>34.83</u>
Trailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hinge line)-ft ³	<u>526.125</u>	<u>0.0018</u>
Product of Area and Mean Chord	<u> </u>	<u> </u>

TABLE 3. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: N₈ - OMS Nozzle

GENERAL DESCRIPTION: Basic OMS Nozzle of the 2A Orbiter Configuration
(VL70-000089"B")

SCALE MODEL = 0.015

DRAWING NO.

VL70-008306

DIMENSIONS	FULL-SCALE		MODEL SCALE
MACH NO <u>N/A</u>			
DIAMETER DEX ~ IN	<u>50.00</u>		<u>0.750</u>
DIAMETER DT ~ IN	<u>N/A</u>		
DIAMETER DIN ~ IN	<u>28.00</u>		<u>0.420</u>
ON ~ DEGREES	<u>N/A</u>		
AREA ~ ft ²			
MAX CROSS-SECTIONAL	<u>13.635</u>		<u>.003067</u>
OMS GIMBAL ORIGIN ±8.0 deg.	<u>X_o</u>	<u>Y_o</u>	<u>Z_o</u>
RIGHT NOZZLE ~ IN	<u>1518</u>	<u>88.0</u>	<u>492</u>
LEFT NOZZLE ~ IN	<u>1518</u>	<u>-88.0</u>	<u>492</u>
NULL POSITION	<u>PITCH</u>	<u>YAW</u>	
RIGHT NOZZLE ~ DEG.	<u>15°49'</u>	<u>12°17'</u>	
LEFT NOZZLE ~ DEG.	<u>15°49'</u>	<u>-12°17'</u>	
NOTE: Intersection of nozzle exit plane and nozzle centerline ~ in.	<u>X_o</u>	<u>1570.75</u>	<u>23.561</u>
	<u>Y_o</u>	<u>±99.25</u>	<u>±1.489</u>
	<u>Z_o</u>	<u>507.25</u>	<u>7.609</u>

TABLE 3. - MODEL DIMENSIONAL DATA - Concluded.

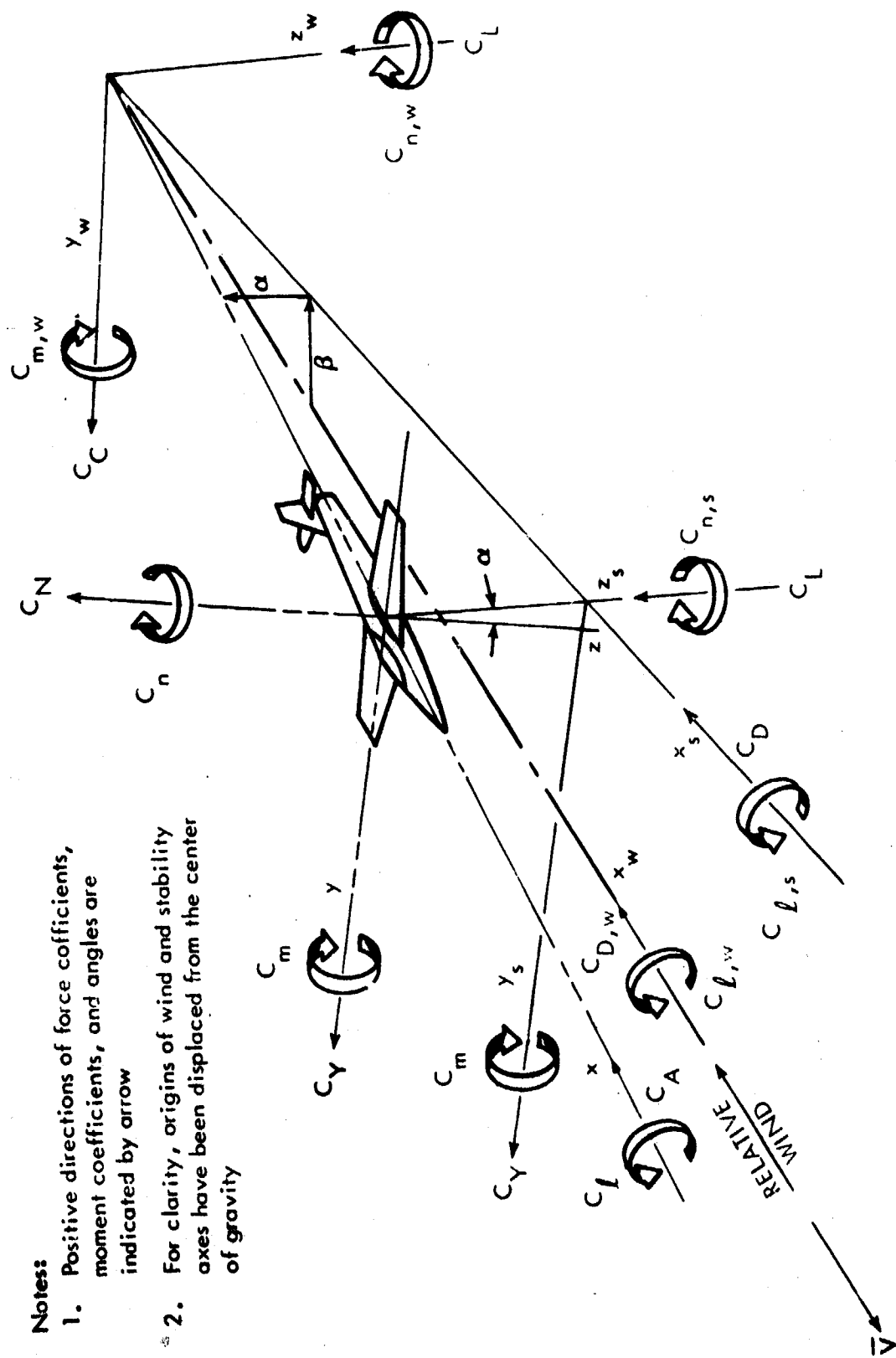
MODEL COMPONENT : F4 BODY FLAP

GENERAL DESCRIPTION : 2A CONFIGURATION PER LINES VL70-000094

SCALE MODEL = 0.015

DRAWING NUMBER : VL70-000094 "A"

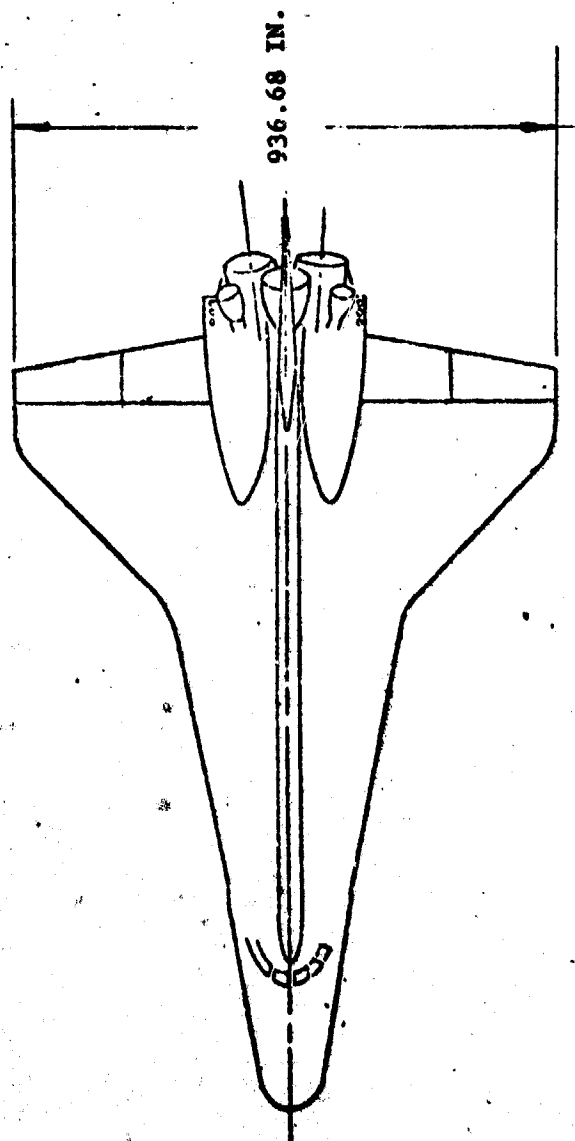
DIMENSIONS :	FULL SCALE	MODEL SCALE
Length ~ in.	<u>84.70</u>	<u>1.2705</u>
Max. Width ~ in.	<u>265.00</u>	<u>3.975</u>
Max. Depth ~ in.	<u>21.00</u>	<u>0.315</u>
Fineness Ratio	<u> </u>	<u> </u>
Area, ft ²	<u> </u>	<u> </u>
Max. Cross-Sectional	<u> </u>	<u> </u>
Planform	<u>142.64</u>	<u>0.0321</u>
Wetted	<u> </u>	<u> </u>
Base	<u>38.646</u>	<u>0.0087</u>



Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrow
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

Figure 1. - Axis Systems.



REFERENCE	DIMENSIONS
AREA	$S_w = 2690 \text{ ft}^2$
MAC	$\bar{C} = 474.8 \text{ IN.}$
C.G.	$X = 876.48 \text{ IN.}$
	$Z = 400 \text{ IN.}$
SPAN	$b_w = 936.68 \text{ IN.}$
LENGTH	$L = 1328 \text{ IN.}$

MRC $X_o = 1076.48$

415.7 IN.

FRL $Z = 400 \text{ IN.}$

1328.3 IN.

STA

$X_o = 200$

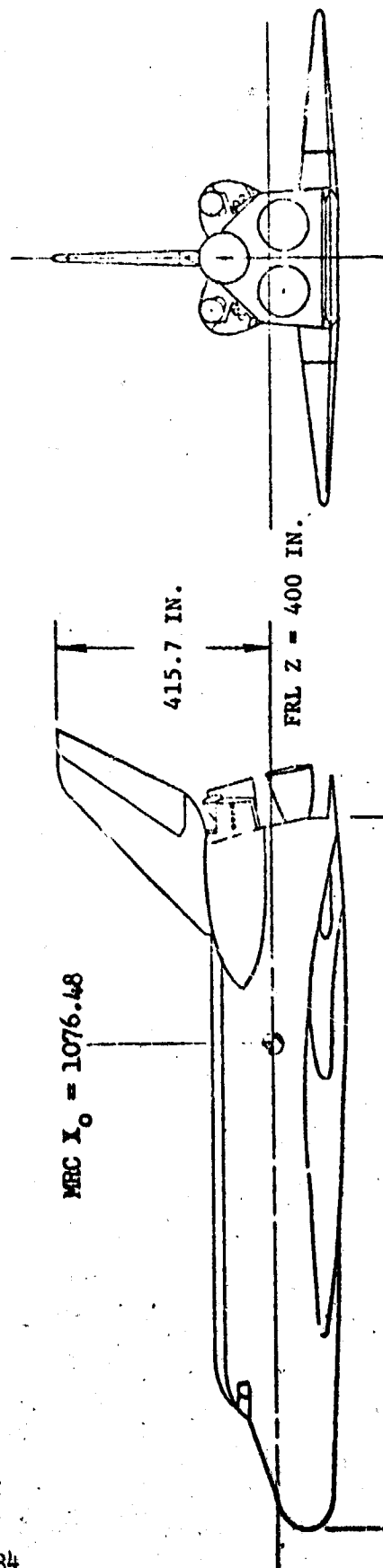


Figure 2. - SSV Orbiter 2A Configuration Baseline.



(a) Top view

Figure 3. - Model installation photographs and shadowgraphs.



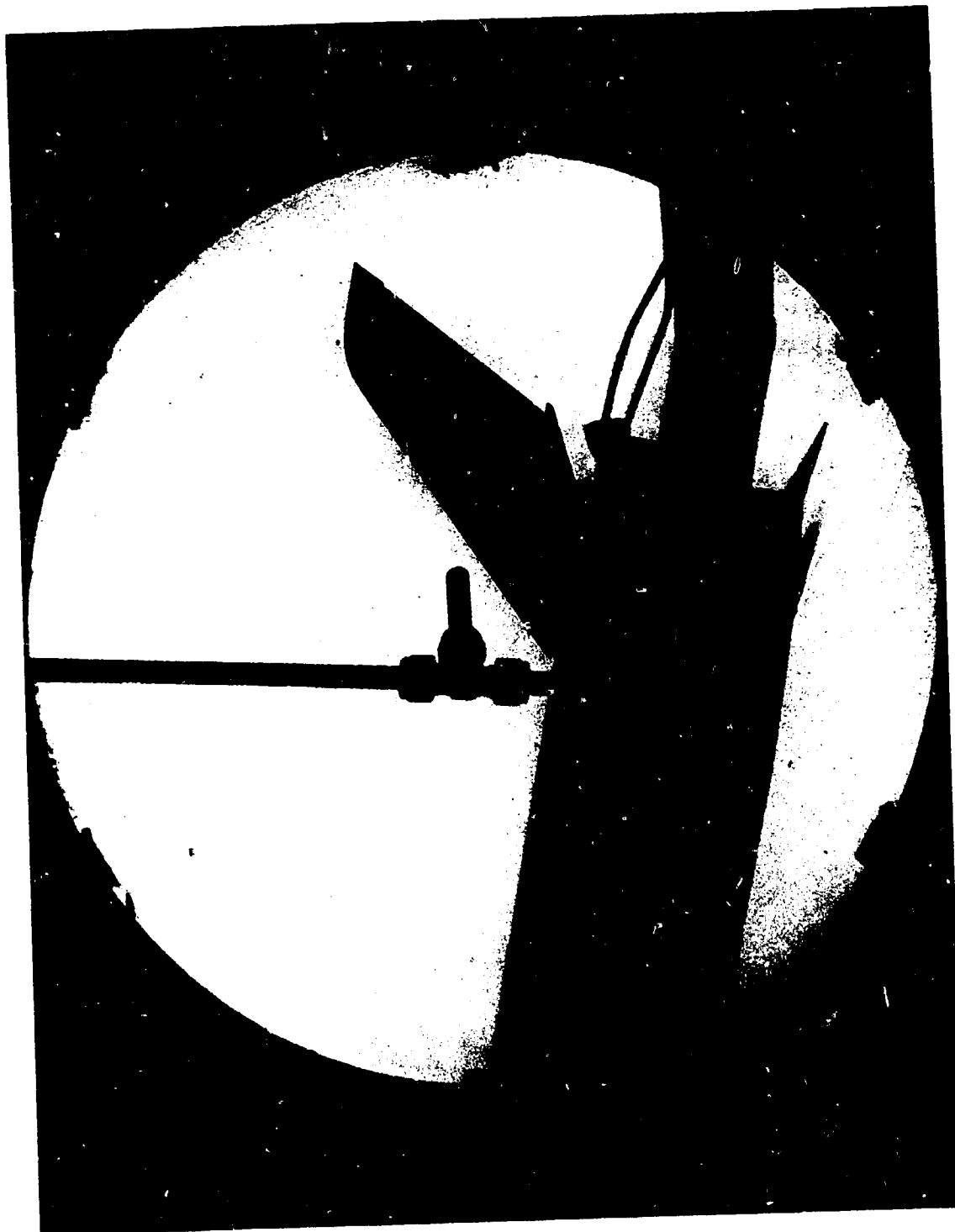
(b) Close-up showing base pressure instrumentation

Figure 3. - Continued.



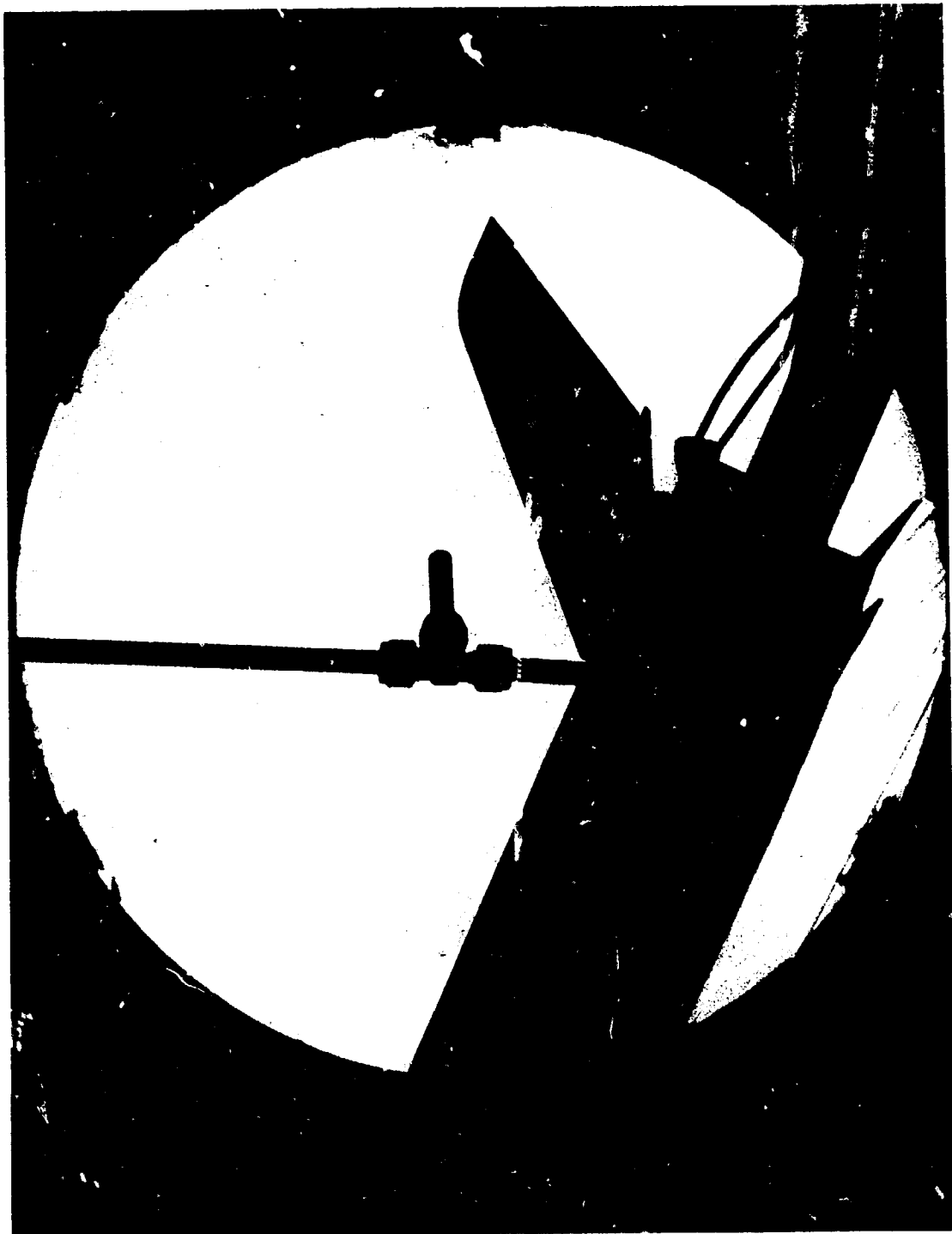
(c) Side view

Figure 3. - Continued.



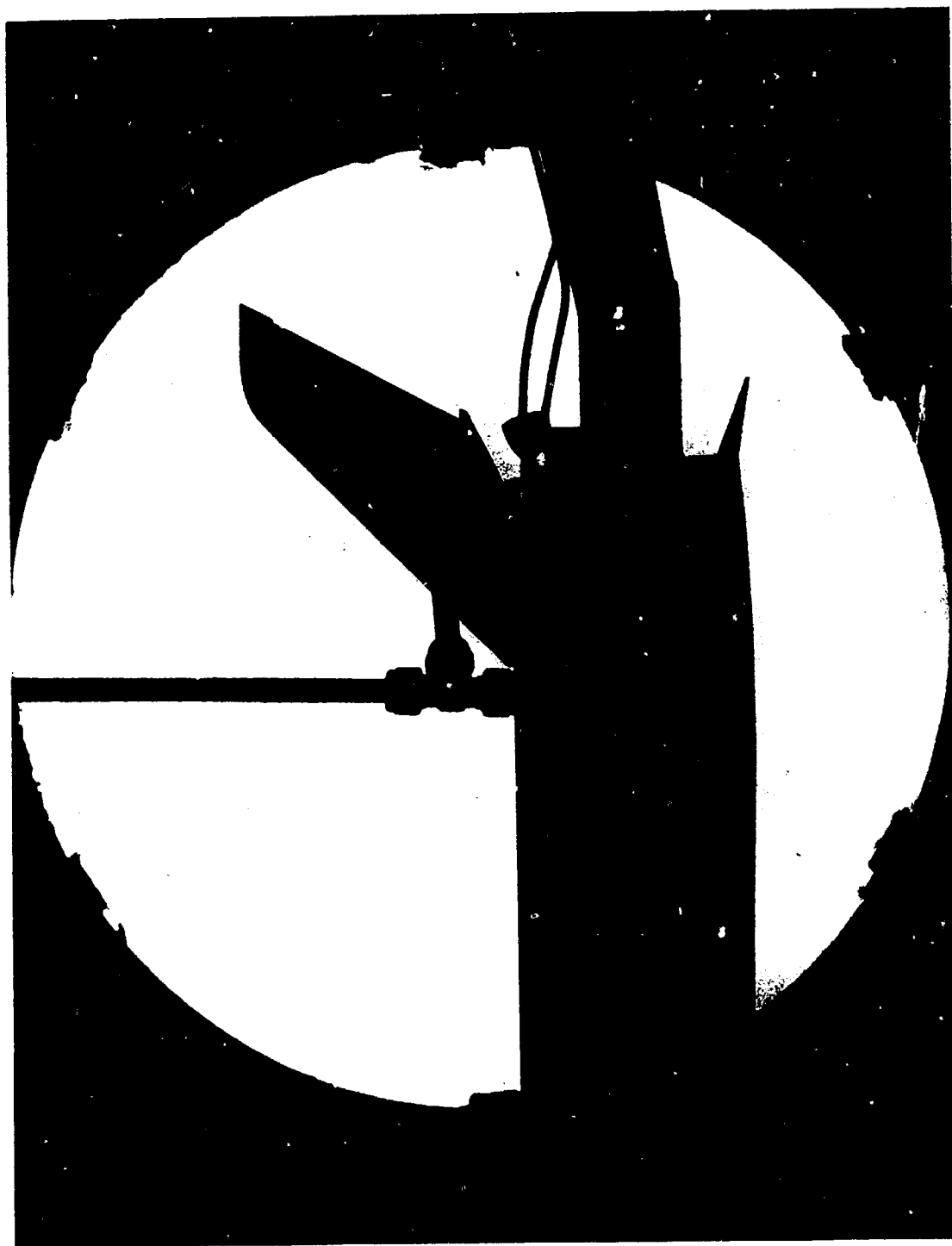
(d) $M = 7.3$, $\alpha = 9.5^\circ$, $\beta = 0^\circ$, $\delta_{e_L} = \delta_{e_R} = 10^\circ$, $\delta_{SB} = 54.92^\circ$, $\delta_{BF} = 13.75^\circ$, $\delta_r = 0^\circ$

Figure 3. - Continued.



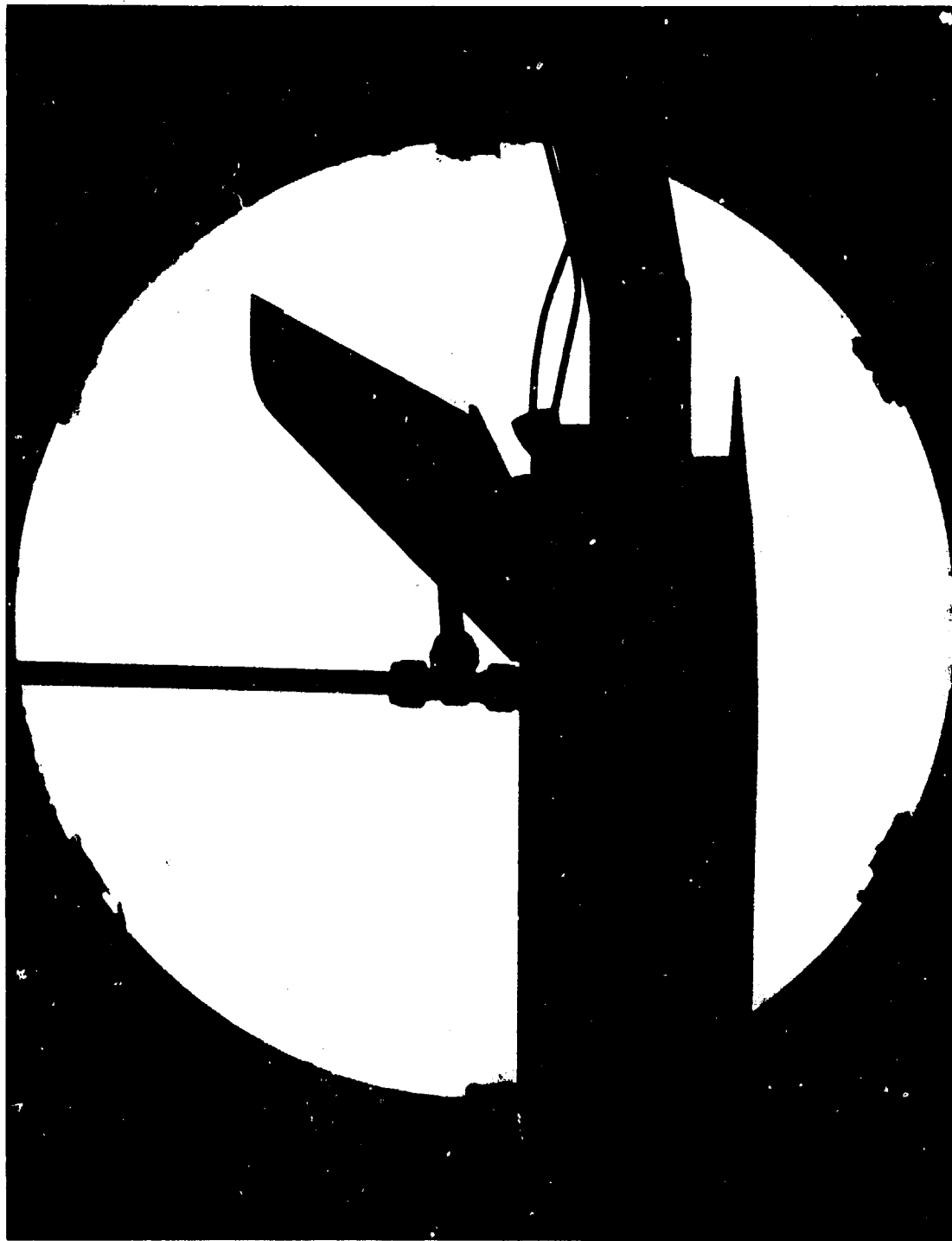
(e) $M = 7.3$, $\alpha = 23.5^\circ$, $\beta = 0^\circ$, $\delta_{e_L} = \delta_{e_R} = 10^\circ$, $\delta_{SB} = 54.92^\circ$, $\delta_{BF} = 13.75^\circ$, $\delta_r = 0^\circ$

Figure 3. - Continued.



(f) $M = 7.3$, $\alpha = 0^\circ$, $\beta = 0^\circ$, $\delta_{e_L} = \delta_{e_R} = 0^\circ$, $\delta_{SB} = 54.92^\circ$, $\delta_{BF} = 13.75^\circ$, $\delta_r = 0^\circ$

Figure 3. - Continued.



(g) $M = 7.3$, $\alpha = 0^\circ$, $\beta = 0^\circ$, $\delta_{e_L} = \delta_{e_R} = 0^\circ$, $\delta_{SB} = 54.92^\circ$, $\delta_{BF} = 0^\circ$, $\delta_r = 0^\circ$

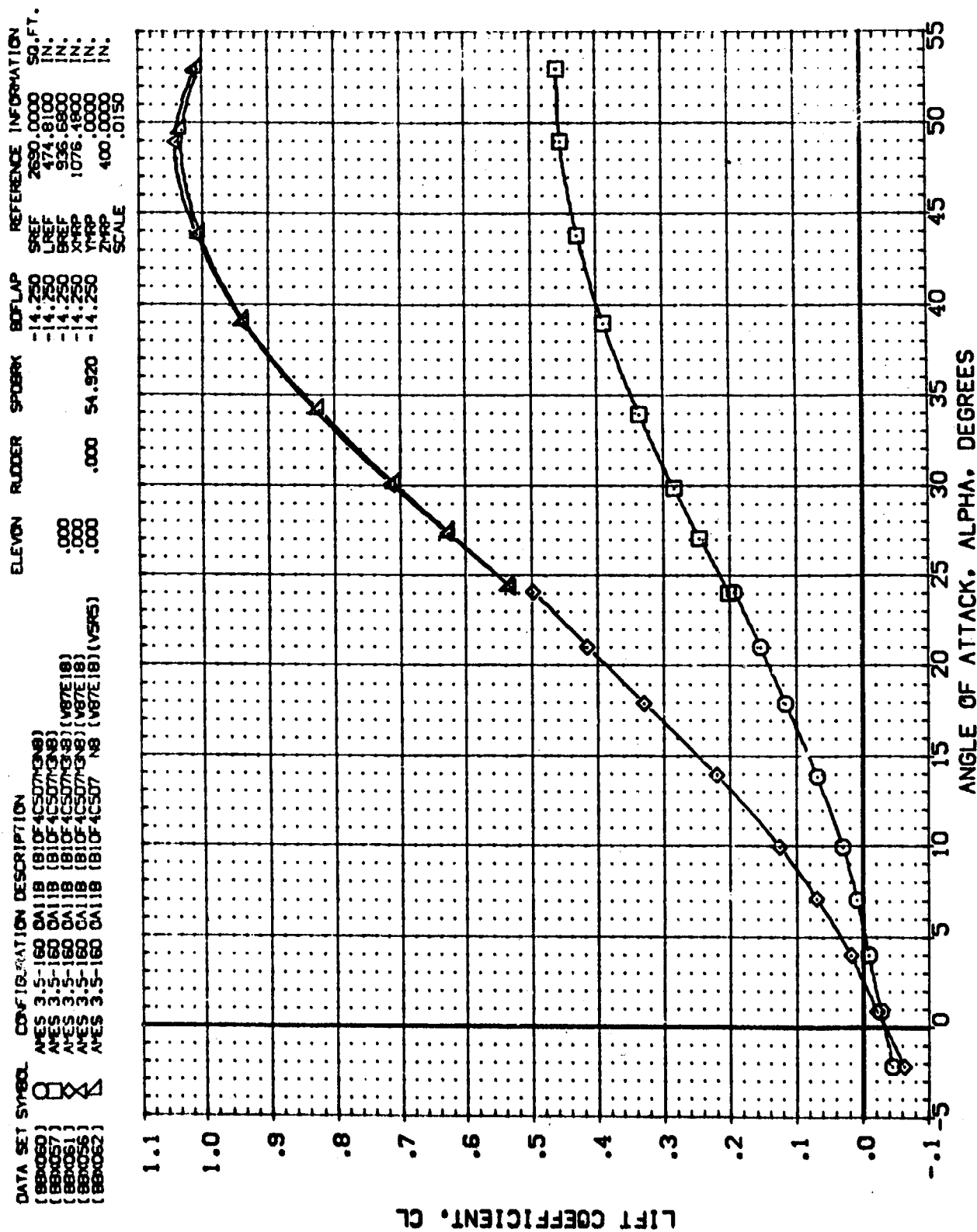
Figure 3. - Continued.



(h) $M = 7.3$, $\alpha = 22.5^\circ$, $\beta = 0^\circ$, $\epsilon_L = \epsilon_P = \epsilon_{GB} = 54.92^\circ$, $\epsilon_{BF} = 0^\circ$, $\epsilon_T = 0^\circ$

Figure 3. - Concluded.

DATA FIGURES



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BD FLAP	REFERENCE INFORMATION
(B00060)	AVES 3.5-160 0A11B (B10F4C507G4B)			-14.250	SREF	2690.0000 SQ.FT.
(B00057)	AVES 3.5-160 0A11B (B10F4C507G4B)			-14.250	LREF	474.8100 IN.
(B00051)	AVES 3.5-160 0A11B (B10F4C507G4B) (V87E18)	.000		-14.250	BREF	936.6800 IN.
(B00056)	AVES 3.5-160 0A11B (B10F4C507G4B) (V87E18)	.000	.000	-14.250	YMRP	1076.1600 IN.
(B00062)	AVES 3.5-160 0A11B (B10F4C507 G8 (V87E18) (V87E18)	.000	.000	54.920	ZMRP	400.0000 IN.
					SCALE	.0150

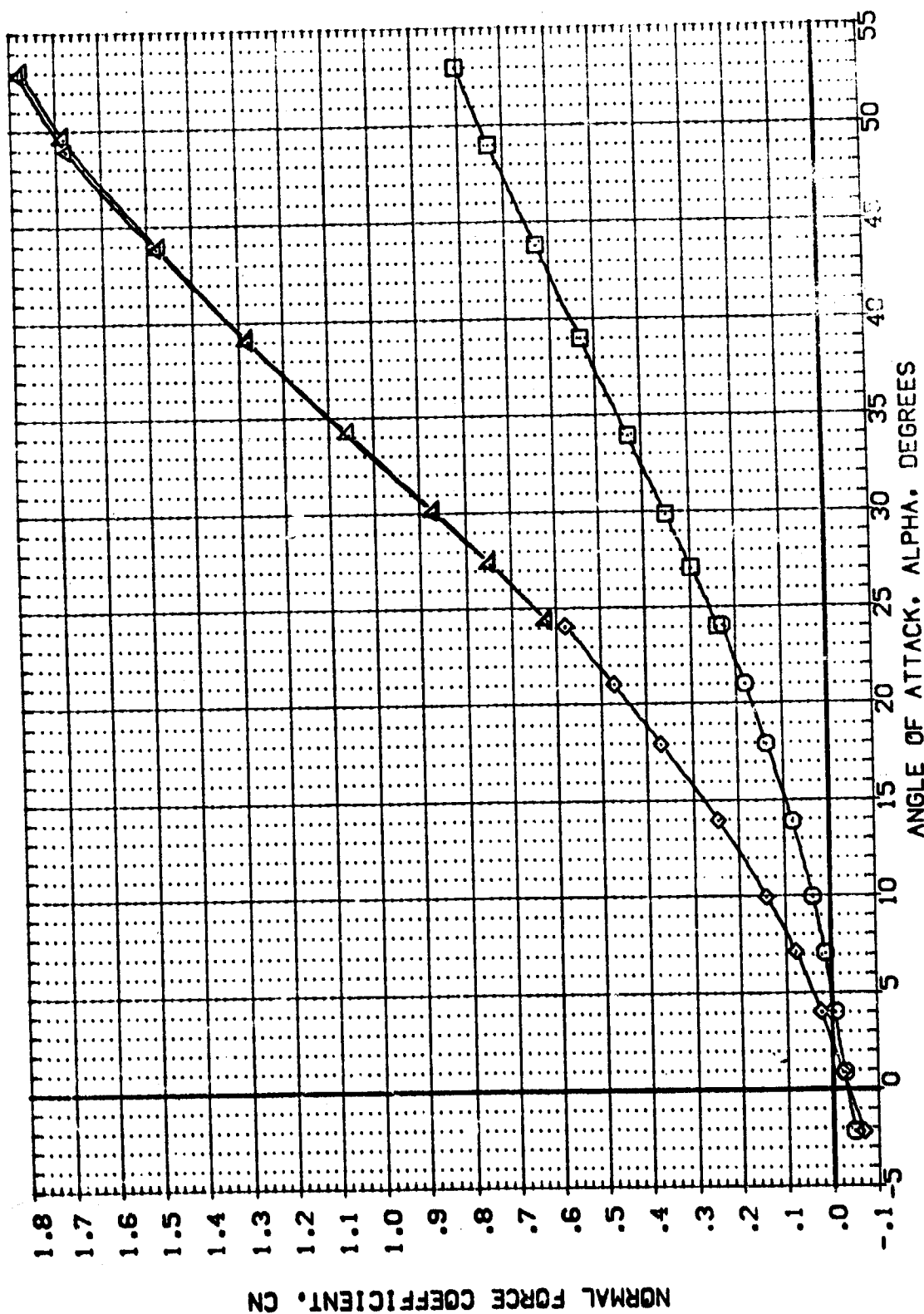


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 DA11B (B10F4C507)G8)			-14.250	SREF	2690.0000 SQ.FT.
(BBX057)	AVES 3.5-160 DA11B (B10F4C507)G8)			-14.250	LREF	474.8100 IN.
(BBX061)	AVES 3.5-160 DA11B (B10F4C507)G8)	.000		-14.250	BREF	936.6800 IN.
(BBX056)	AVES 3.5-160 DA11B (B10F4C507)G8)	.000	.000	-14.250	XMRP	1076.1800 IN.
(BBX062)	AVES 3.5-160 DA11B (B10F4C507) N8 (V87E18) (V87E18) (V87E18)	.000	.000	54.920	YMRP	400.0000 IN.
					ZMRP	400.0000 IN.
					SCALE	.0150

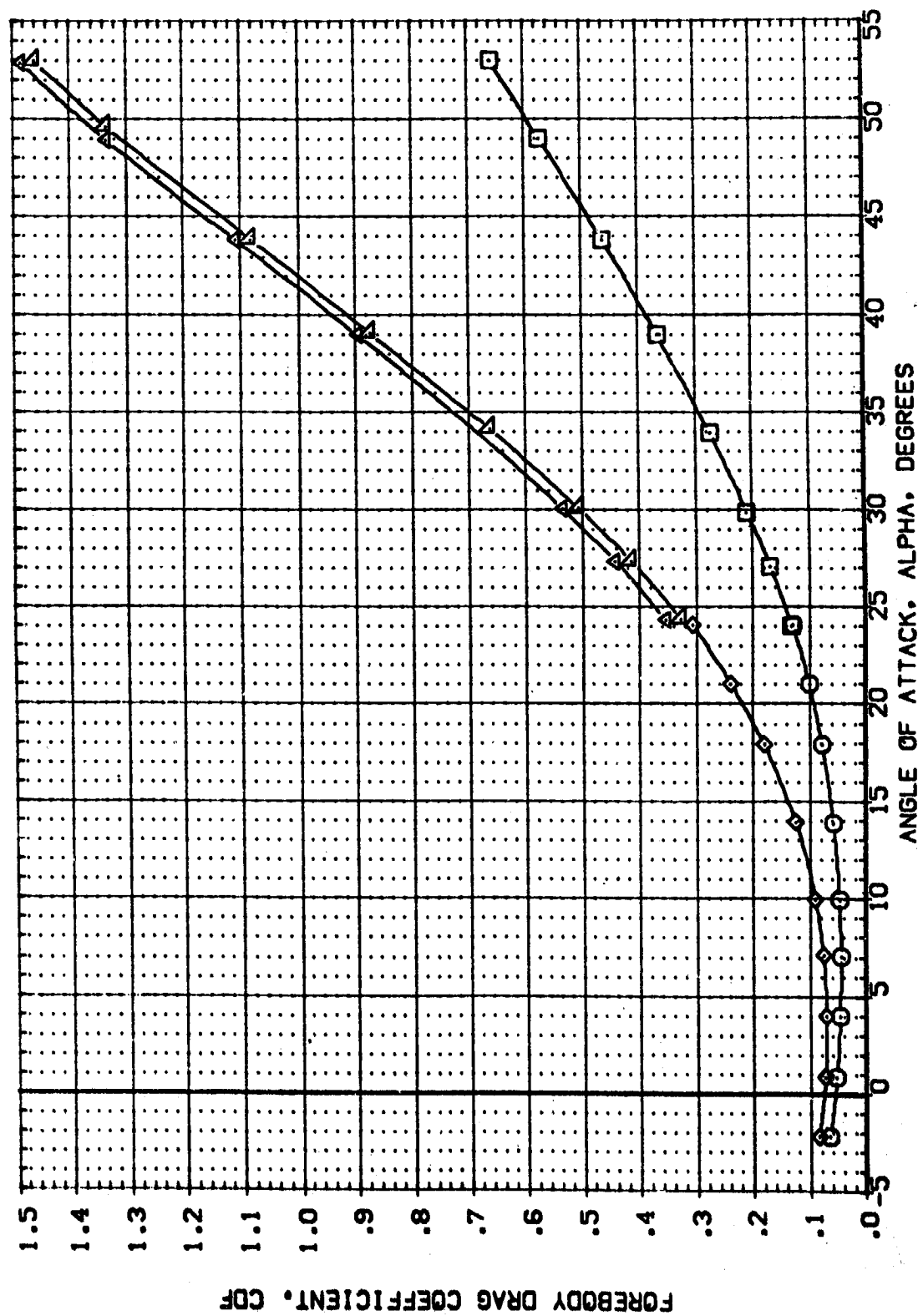


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(880050)	AMES 3-5-160 CA 3 (810F4C507M3V8)				SREF	2690.0000 50.FT.
(880057)	AMES 3-5-160 CA11B (810F4C507M3V8)				LREF	474.8100 IN.
(880058)	AMES 3-5-160 CA11B (810F4C507M3V8)	.000			BREF	936.6800 IN.
(880059)	AMES 3-5-160 CA11B (810F4C507M3V8)	.000			XMRP	1076.4800 IN.
(880060)	AMES 3-5-160 CA11B (810F4C507M3V8)	.000	.000	54.920	YMRP	400.0000 IN.
(880061)	AMES 3-5-160 CA11B (810F4C507M3V8)	.000			ZMRP	400.0000 IN.
(880062)	AMES 3-5-160 CA11B (810F4C507M3V8)				SCALE	.0150

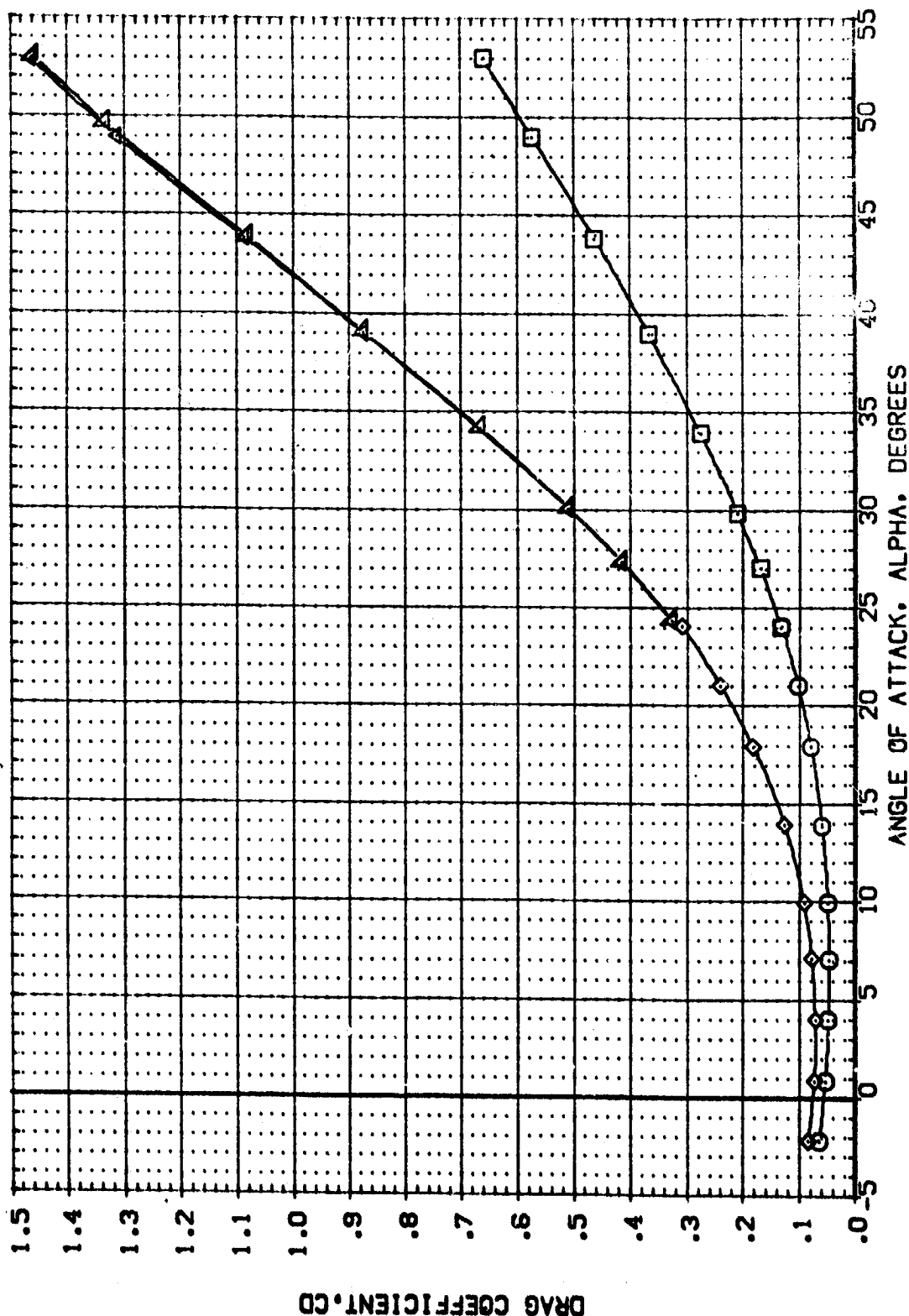


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 CA11B (810F4C507G-8)				-14.250	SREF 2690.0000 SQ.FT.
(BBX057)	AVES 3.5-160 CA11B (910F4C507G-8)				-14.250	LREF 474.8100 IN.
(BBX061)	AVES 3.5-160 CA11B (810F4C507G-8) (V87E18)	.000			-14.250	BREF 936.6800 IN.
(BBX062)	AVES 3.5-160 CA11B (810F4C507G-8) (V87E18)	.000	.000	54.920	-14.250	XMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

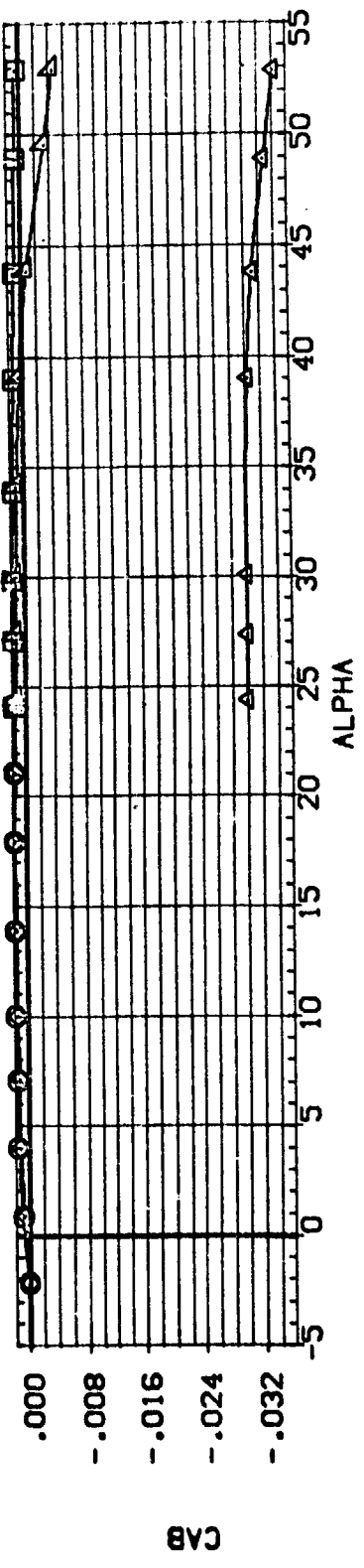
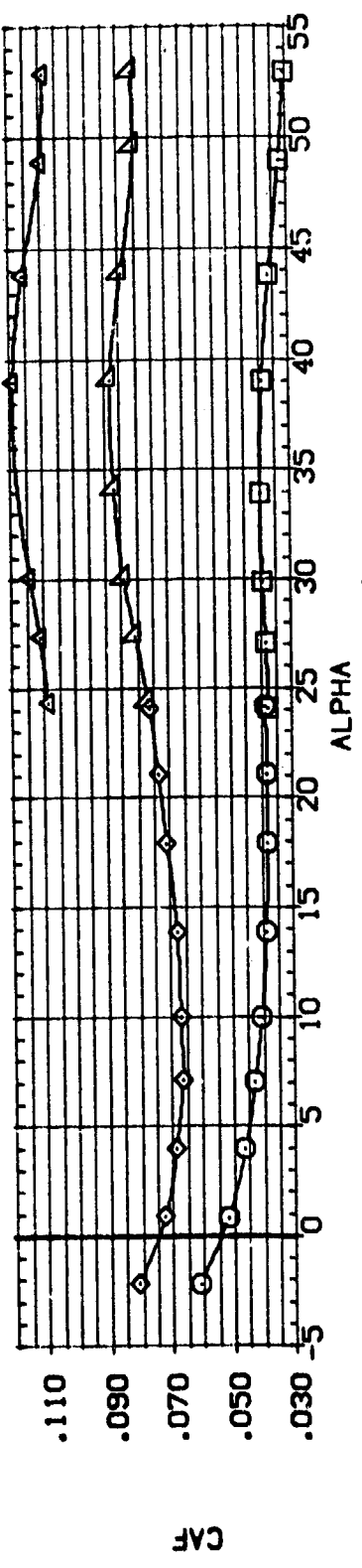
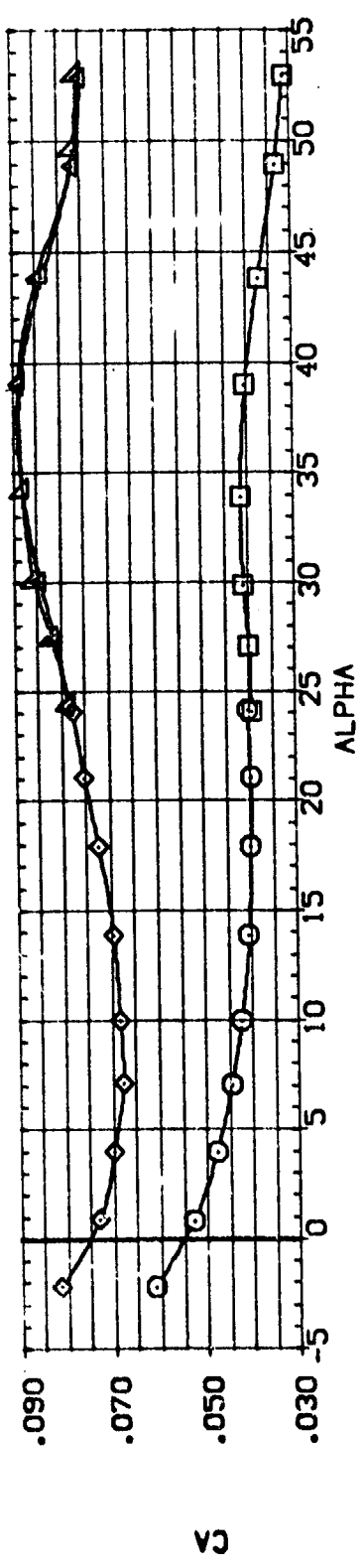


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BB0060)	AVES 3-5-160 CA11B (B10F4C507H3-8)				-14.250	SREF 2690.0000 SQ.FT.
(BB0067)	AVES 3-5-160 CA11B (B10F4C507H3-8)				-14.250	L REF 474.8100 IN.
(BB0061)	AVES 3-5-160 CA11B (B10F4C507H3-8)	.000			-14.250	BREF 336.6800 IN.
(BB0056)	AVES 3-5-160 CA11B (B10F4C507H3-8)	.000			-14.250	XMRP 1076.4800 IN.
(BB0052)	AVES 3-5-160 CA11B (B10F4C507H3-8)	.000	.000	\$4.920	-14.250	YMRP 400.0000 IN.
						SCALE .0150

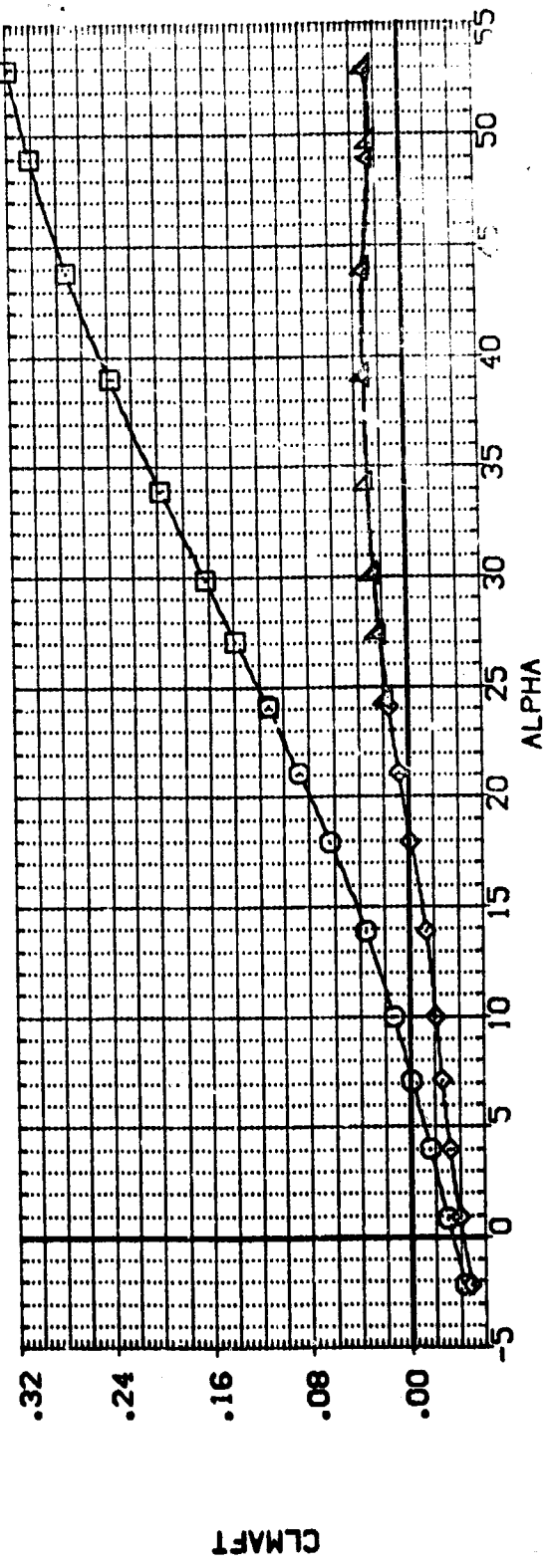
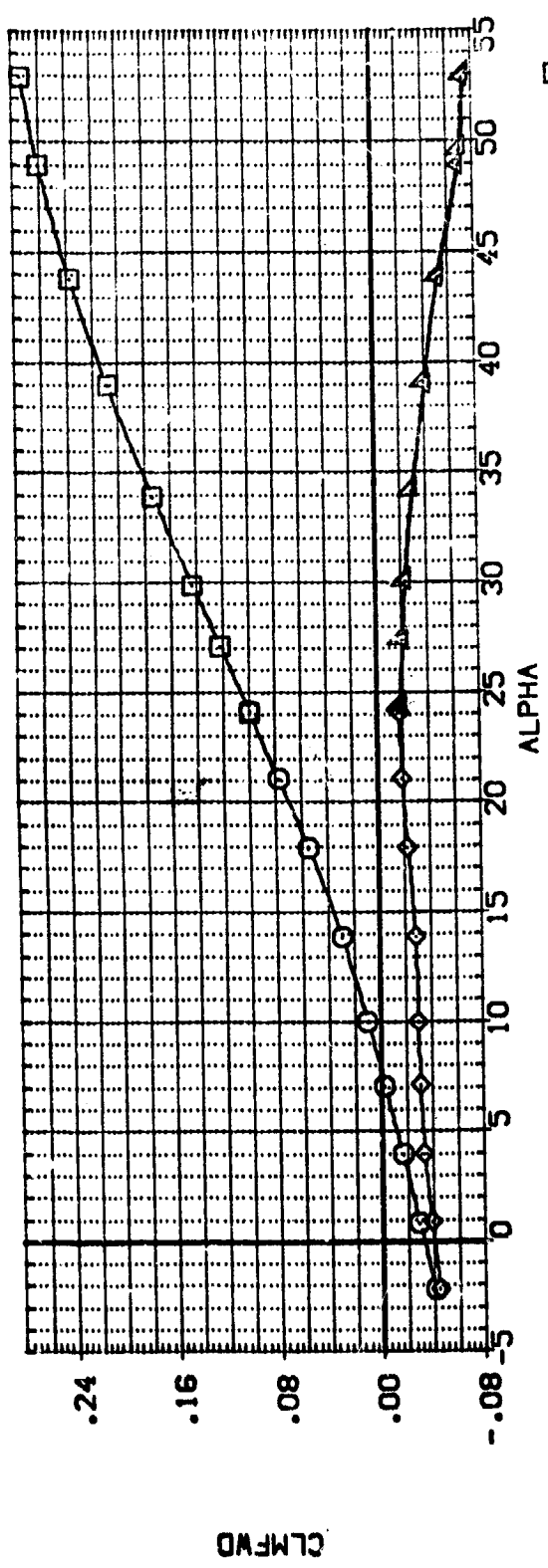


FIG. 1.A MACH 7.32 COMPONENT BUILDUP
 (A)MACH = 7.32

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	FLAPPER	SPOILER	BOFLAP	REFERENCE INFORMATION
(88X060)	□	AVES 3.5-160 CA118 (B10F4C507) (N8)				-14.250	SREF 2690.0000 50.FT.
(88X057)	◇	AVES 3.5-160 CA118 (B10F4C507) (N8)				-14.250	LREF 474.8100 IN.
(88X061)	○	AVES 3.5-160 CA118 (B10F4C507) (N8)	.000			-14.250	SREF 936.6800 IN.
(88X056)	△	AVES 3.5-160 CA118 (B10F4C507) (N8)	.000	.000	54.920	-14.250	XREF 1076.4800 IN.
(88X062)	▽	AVES 3.5-160 CA118 (B10F4C507) (N8)	.000	.000		-14.250	YREF 400.0000 IN.
							ZREF .0150

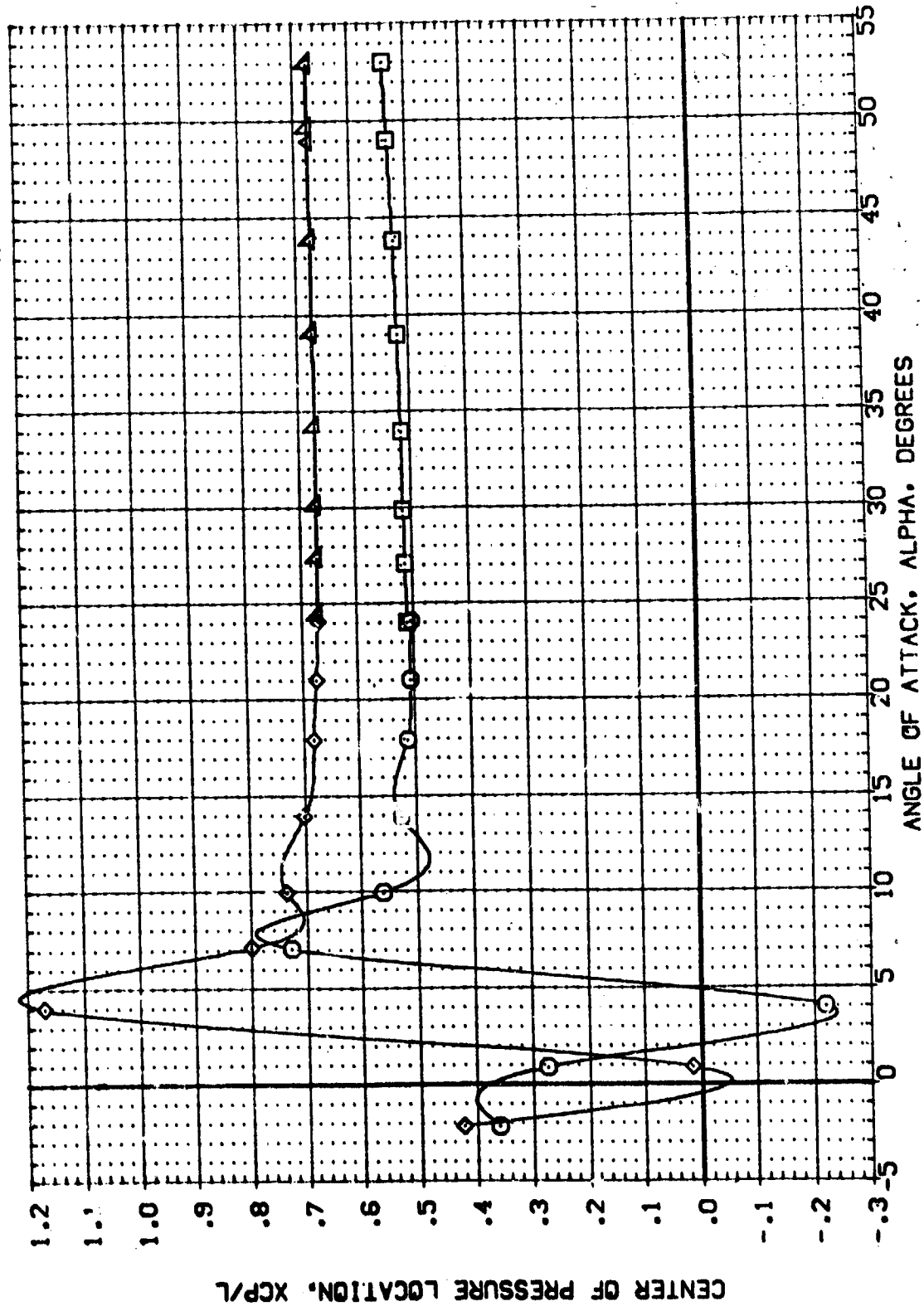


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOON	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	SREF 2650.0000 50.000
(BBX051)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 174.8100 IN.
(BBX052)	AVES 3.5-160 DAI1B (81D4C507-3-8)	.000			-14.250	REF 936.4800 IN.
(BBX053)	AVES 3.5-160 DAI1B (81D4C507-3-8)	.000			-14.250	REF 1076.4800 IN.
(BBX054)	AVES 3.5-160 DAI1B (81D4C507-3-8)	.000	.000	54.520	-14.250	REF 400.0000 IN.
(BBX055)	AVES 3.5-160 DAI1B (81D4C507-3-8)	.000			-14.250	REF 400.0000 IN.
(BBX056)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.
(BBX057)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.
(BBX058)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.
(BBX059)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.
(BBX060)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.
(BBX061)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.
(BBX062)	AVES 3.5-160 DAI1B (81D4C507-3-8)				-14.250	REF 400.0000 IN.

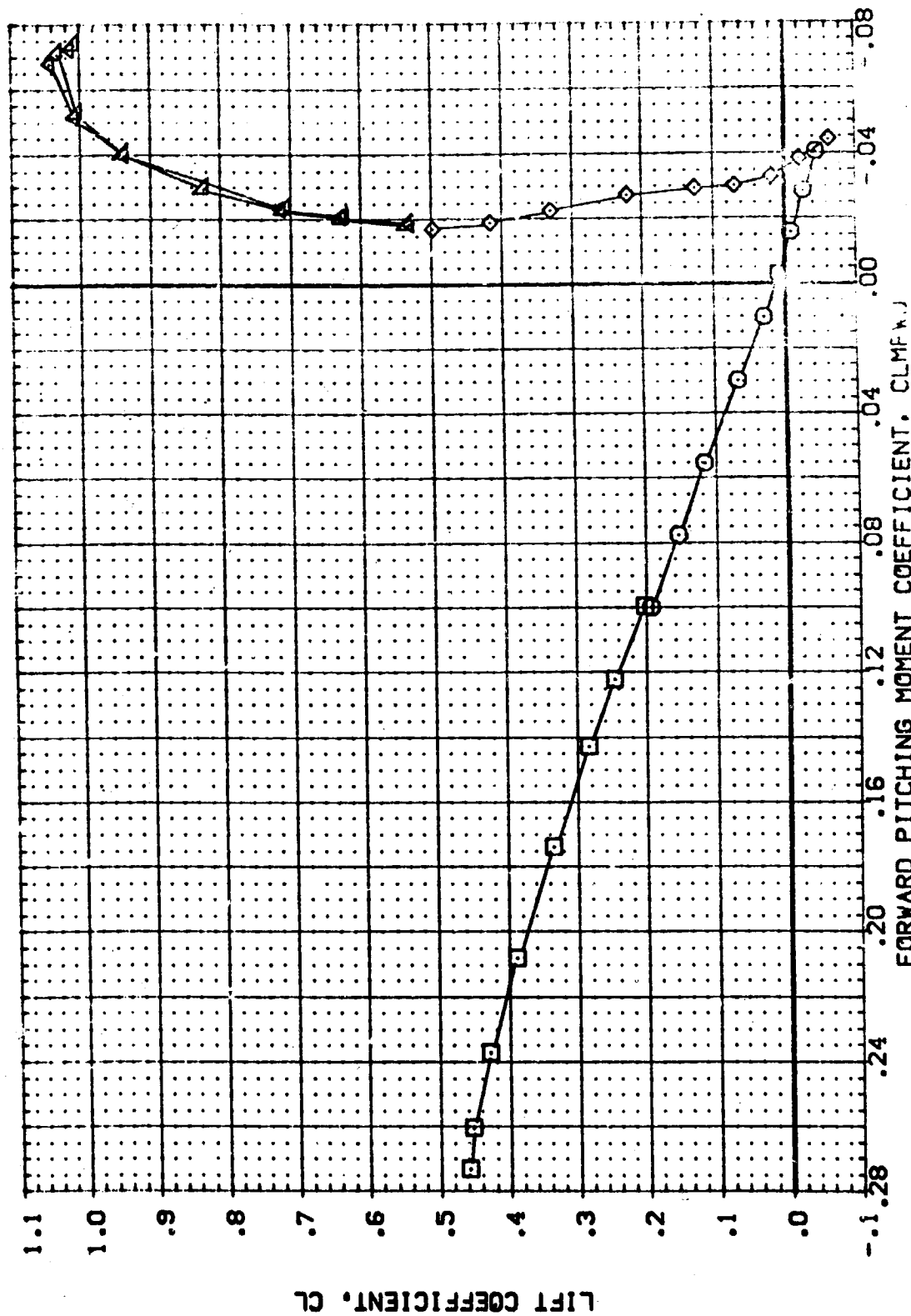


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDLER	SPDBRK	W/LAP	REFERENCE INFORMATION
(BBK060)	AMES 3.5-160 CA11B (B1DF4C507-3-8)				-14.250	SREF 2690.0000 SQ.FT.
(BBK057)	AMES 3.5-160 CA11B (B1DF4C507-3-8)				-14.250	LAREF 474.8100 IN.
(BBK051)	AMES 3.5-160 CA11B (B1DF4C507-3-8)	.000			-14.250	BREF 935.6800 IN.
(BBK056)	AMES 3.5-160 CA11B (B1DF4C507-3-8)	.000			-14.250	XREF 1076.4800 IN.
(BBK062)	AMES 3.5-160 CA11B (B1DF4C507-3-8)	.000	.020	54.920	-14.250	YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

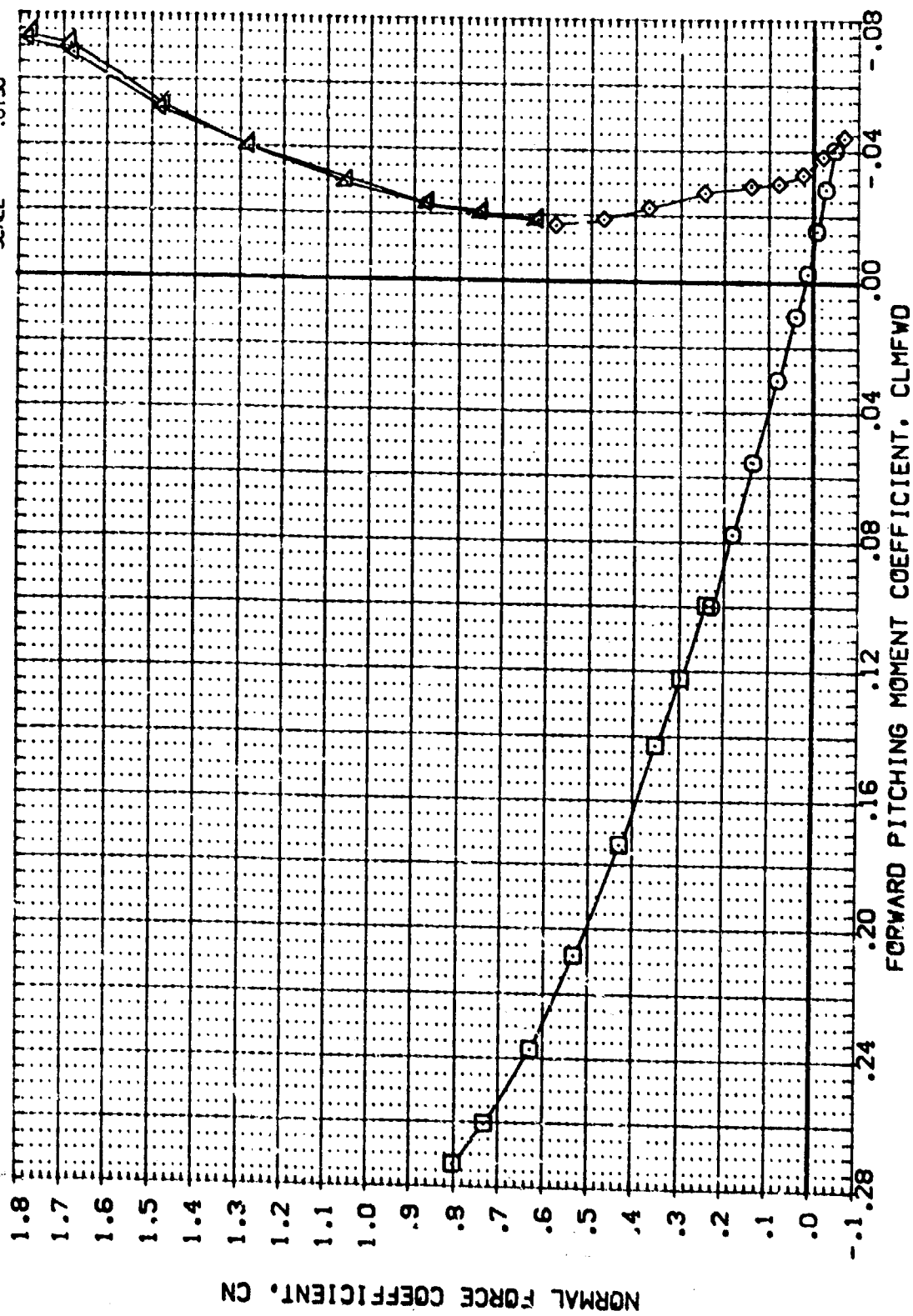


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	FLUDER	SPDRBK	BD/LAP	REFERENCE INFORMATION
(BBK060)	AMES 3.5-160 OA118 (B10F4C507)G48				-14.250	SREF 2690.0000 SQ.FT.
(BBK057)	AMES 3.5-160 OA118 (B10F4C507)G48				-14.250	LREF 474.8100 IN.
(BBK055)	AMES 3.5-160 OA118 (B10F4C507)G48 (V87E18)	.000			-14.250	SREF 536.6800 IN.
(BBK056)	AMES 3.5-160 OA118 (B10F4C507)G48 (V87E18)	.000			-14.250	XREF 1076.4800 IN.
(BBK062)	AMES 3.5-160 OA118 (B10F4C507) N8 (V87E18) (V87E18)	.000	.000	54.920	-14.250	ZREF 400.0000 IN.
						SCALE .0150

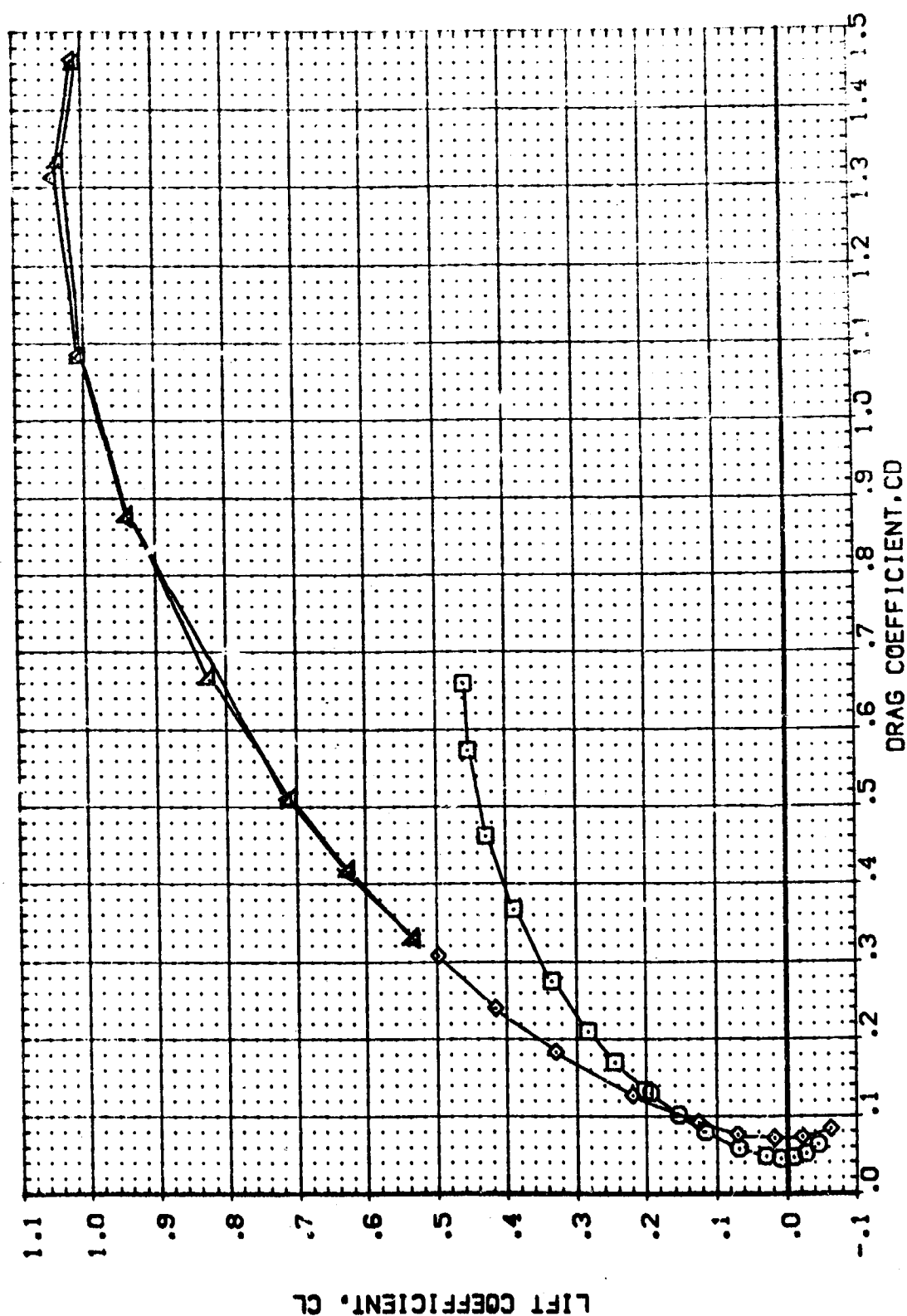


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL: 00 FIGURE DESCRIPTION: REFERENCE INFORMATION

DATA SET SYMBOL	FIGURE DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
[ABX060]	APES 3.5-180 DA118 (B10F4CS07G8)				-14.250	SREF 2690.0000 50.FT.
[ABX061]	APES 3.5-180 DA118 (B10F4CS07G8)	.000			-14.250	LREF 474.8100 IN.
[ABX062]	APES 3.5-180 DA118 (B10F4CS07G8)	.000			-14.250	BREF 936.6800 IN.
[ABX063]	APES 3.5-180 DA118 (B10F4CS07G8)	.000	.000	54.920	-14.250	XREF 1076.1800 IN.
[ABX064]	APES 3.5-180 DA118 (B10F4CS07G8)	.000	.000		-14.250	YREF 400.0000 IN.
[ABX065]	APES 3.5-180 DA118 (B10F4CS07G8)					ZREF 100.0150

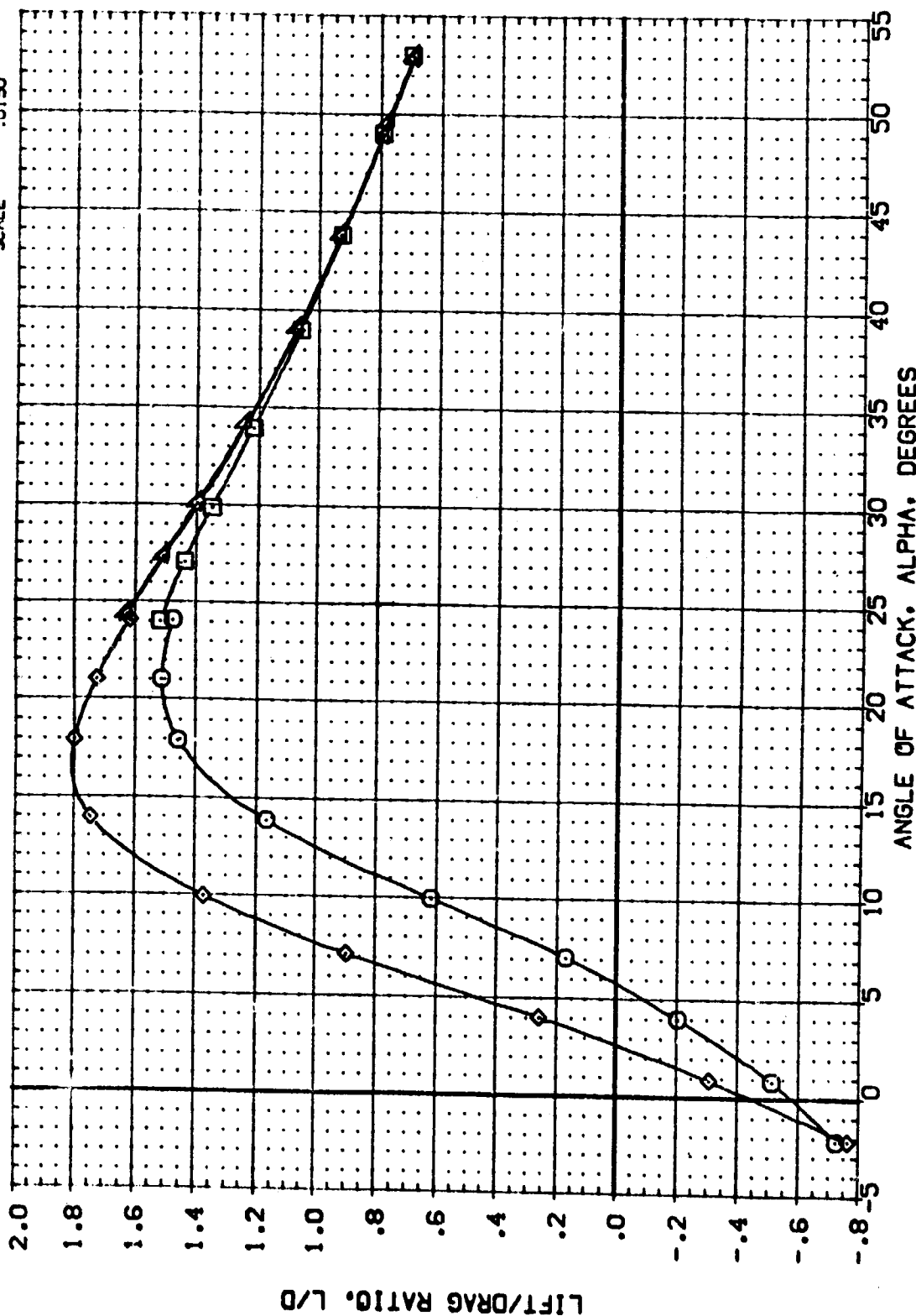


FIG. 1.A MACH 7.32 COMPONENT BUILDUP

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	FLUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(880007)	AVES 3.5-160 CA11B (810F4C507G4B)(V67E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(880008)	AVES 3.5-160 CA11B (810F4C507G4B)(V67E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(880052)	AVES 3.5-160 CA11B (810F4C507G4B)(V67E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XREF 1076.4800 IN.
						YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

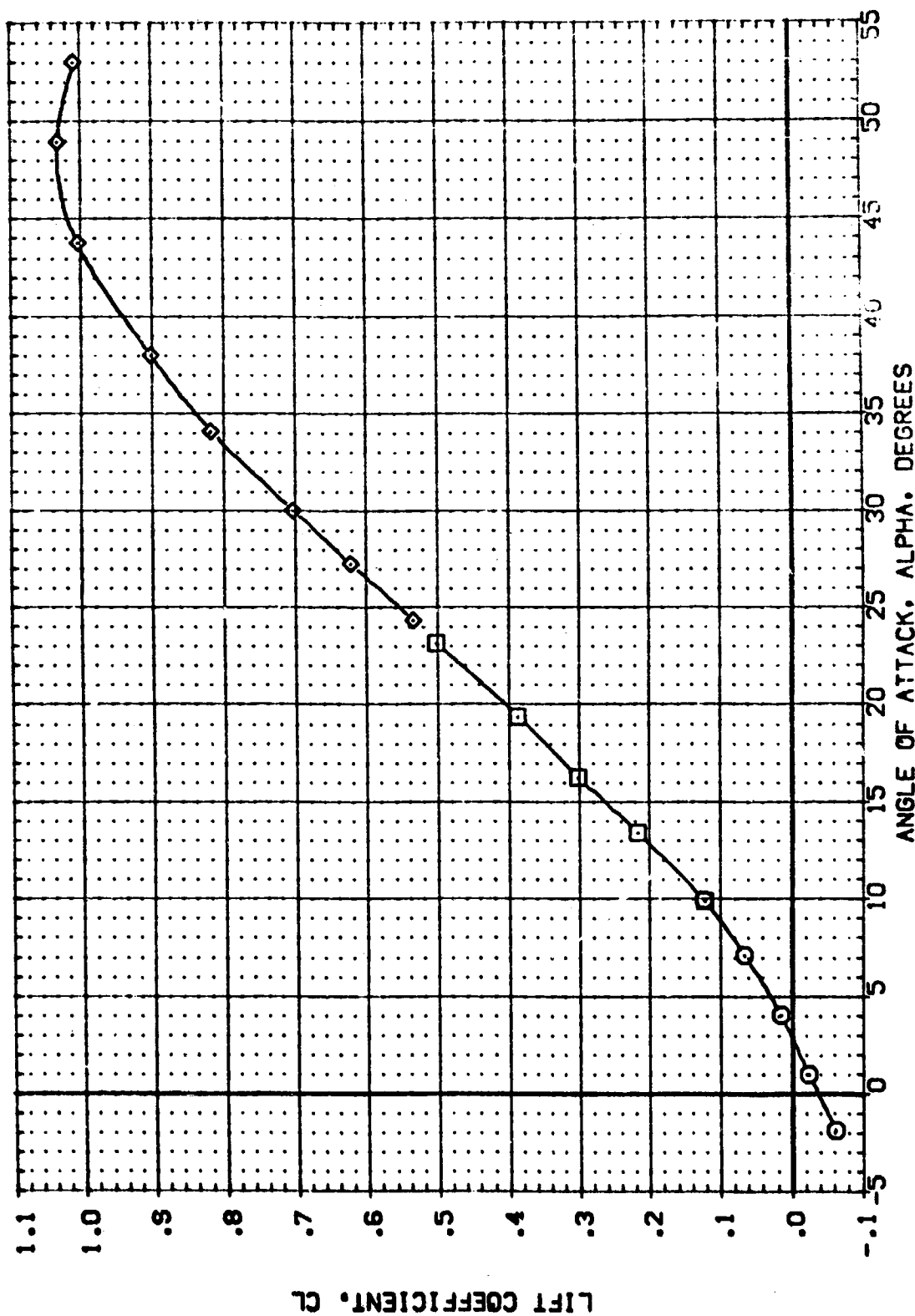


FIG. 1.8 MACH 7.32 BASELINE CHARACTERISTICS

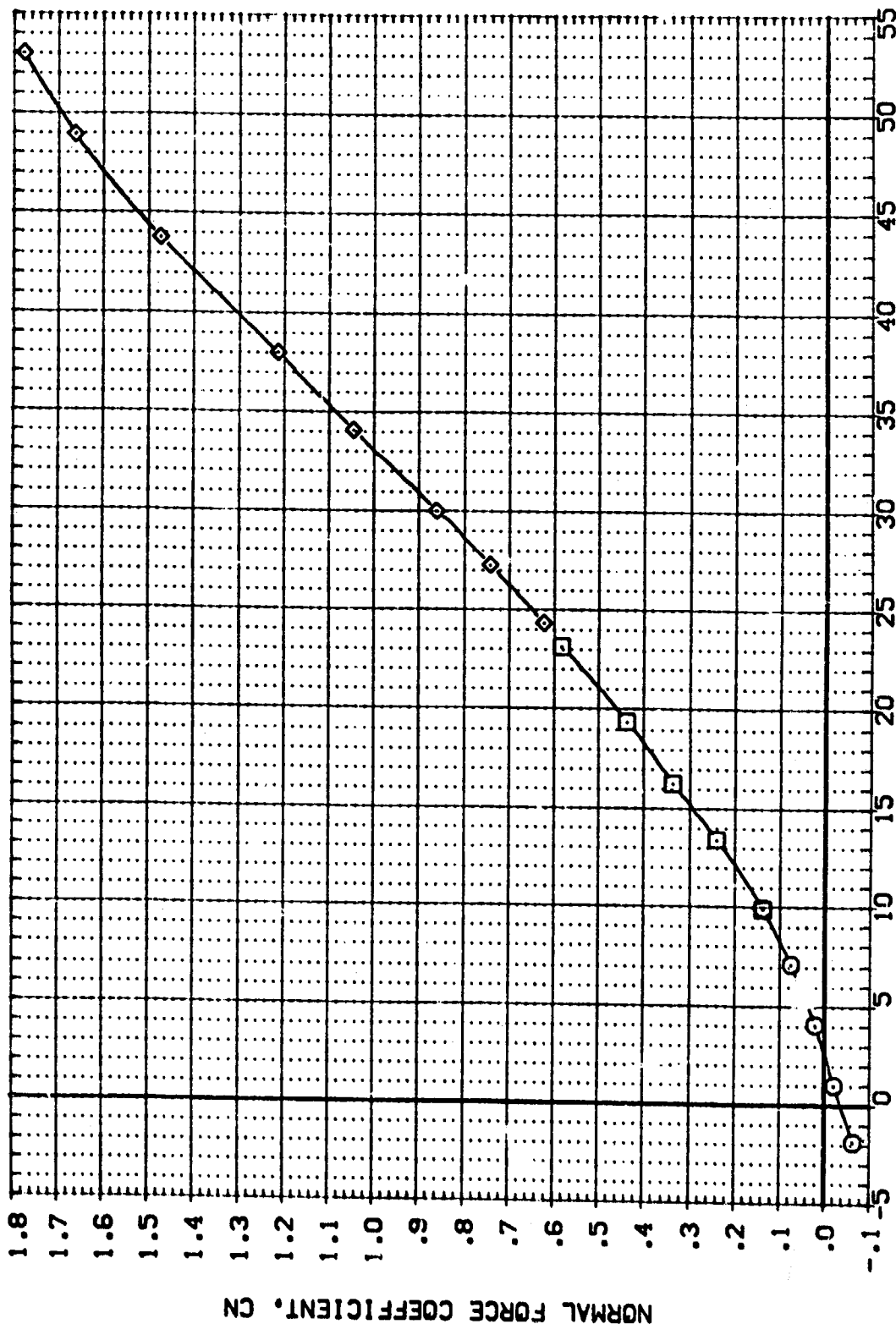
(A)MACH = 7.32

DATA SET SYMBOL: (BBK007) (BBK008) (BBK052)

CONVOLUTION DESCRIPTION:
 AVE 3.5-160 CA11B (B) OF 4CS07M3-8 (V5K5)
 AVE 3.5-160 CA11B (B) OF 4CS07M3-8 (V5K5)
 AVE 3.5-160 CA11B (B) OF 4CS07M3-8 (V5K5)

ELEVON RUDDER SPOON: BOFLAP
 .000 .000 .000
 .000 .000 .000
 .000 .000 .000

REFERENCE INFORMATION:
 SREF 2630.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.1800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 1.8 MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32

DATA SET SYMBOL: (BB0007) (BB0008) (BB0052)

CONFIGURATION DESCRIPTION: ASES 3.5-160 OA118 (B10F4C507K3-8) (V87E18) (V5RS) ASES 3.5-160 OA118 (B10F4C507K3-8) (V87E18) (V5RS) ASES 3.5-160 OA118 (B10F4C507K3-8) (V87E18) (V5RS)

ELEVON: .000 .000 .000

RUDDER: .000 .000 .000

SPDBRK: 54.920 54.920 54.920

BOFLAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION:

	SG.FT.
SREF	2690.0000
LREF	474.8100
BREF	936.6800
XPRP	1076.4800
YPRP	.0000
ZPRP	400.0000
SCALE	.0150

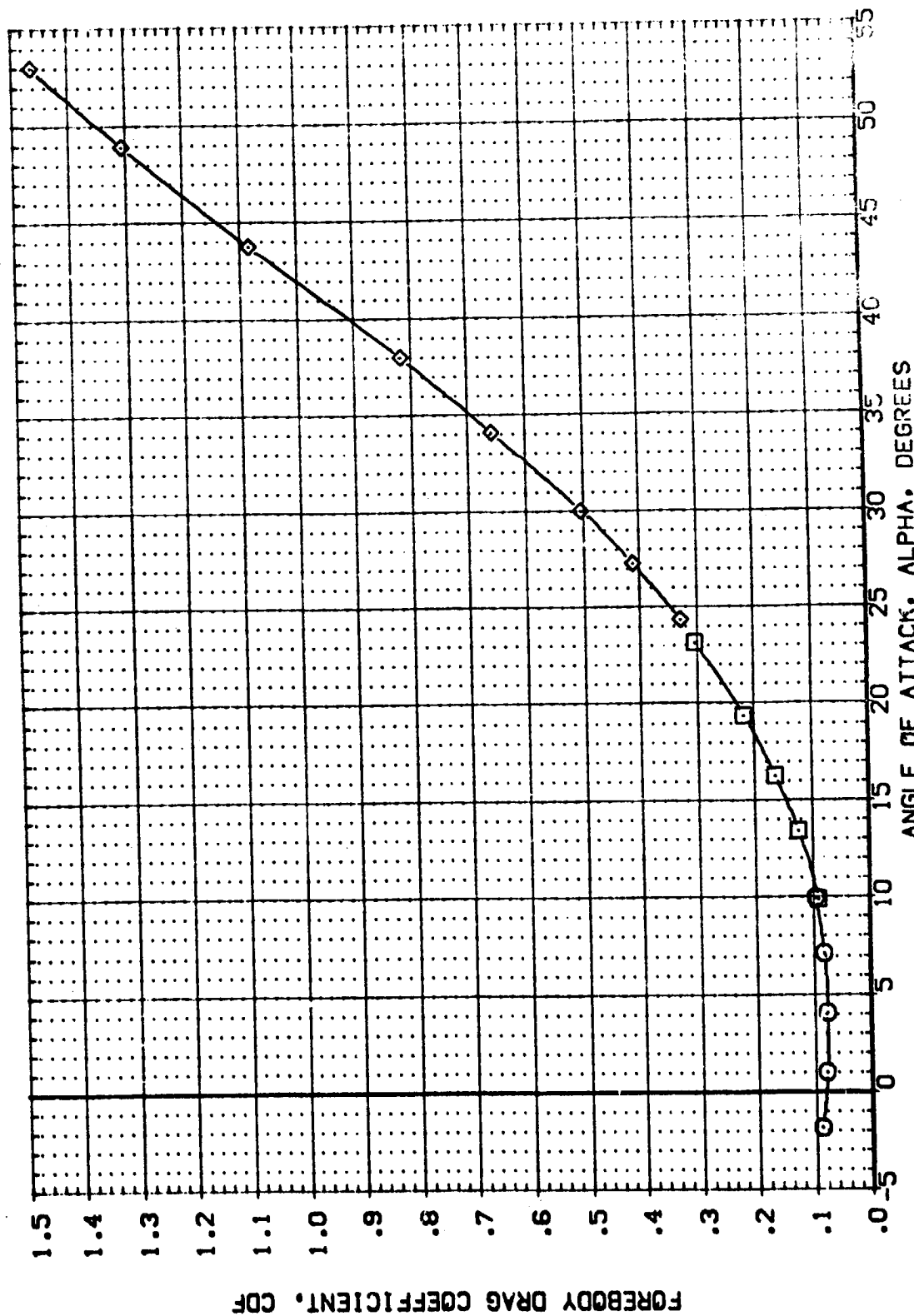


FIG. 1.8 MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BBK007)
(BBK008)
(BBK052)



AVES 3.5-160 CA11B (B10F4C507G-8)(V67E18)(V59S)
AVES 3.5-160 CA11B (B10F4C507G-8)(V67E18)(V59S)
AVES 3.5-160 CA11B (B10F4C507G-8)(V67E18)(V59S)

ELEVON

.000
.000

RUDER

.000
.000

SPOILER

54.920
54.920

BOFLAP

-14.250
-14.250

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP 400.0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

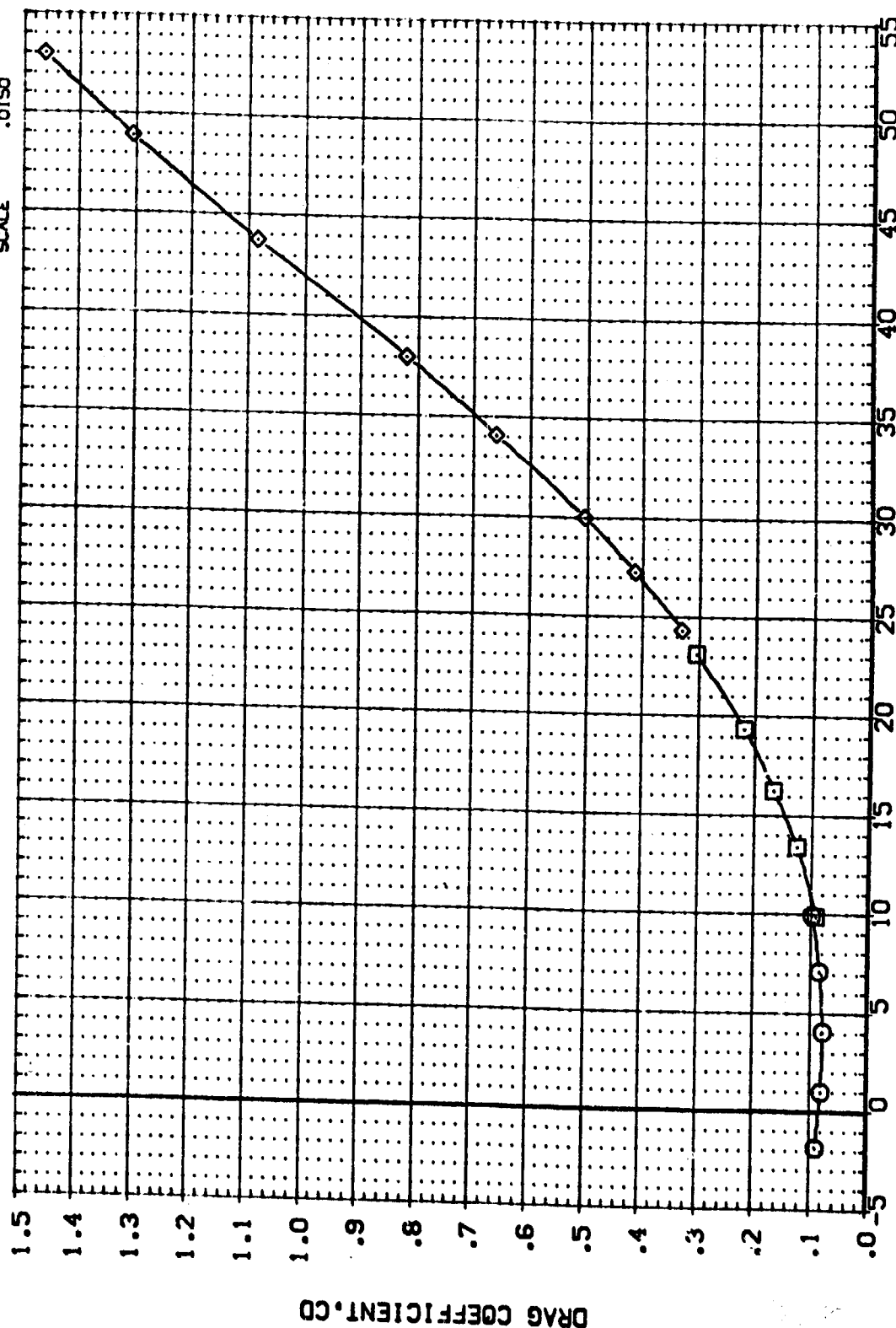


FIG. 1.B MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32

DATA SET SYMBOL: (BBK007) (BBK008) (BBK052)

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 DA118 (81D'4C5D7G3B)(V87E18)(V5N5)
 AYES 3.5-160 DA118 (81D'4C5D7G3B)(V87E18)(V5N5)
 AYES 3.5-150 DA118 (81D'4C5D7G3B)(V87E18)(V5N5)

ELEVON: .000 .000 .000

RUDER: .000 .000 .000

SPOILER: 54.920 54.920 54.920

BD/LAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION:
 SPREF 2690.0000 50.000 IN.
 LPREF 474.8100 IN.
 BRPF 936.6800 IN.
 XTRP 1076.4800 IN.
 YTRP .0000 IN.
 ZTRP 400.0000 IN.
 SCALE .0150

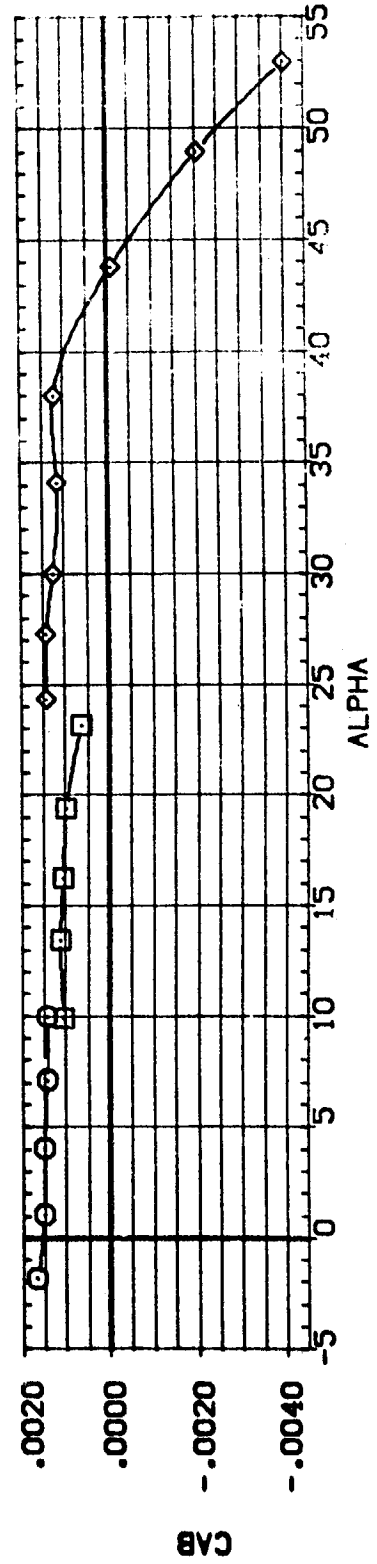
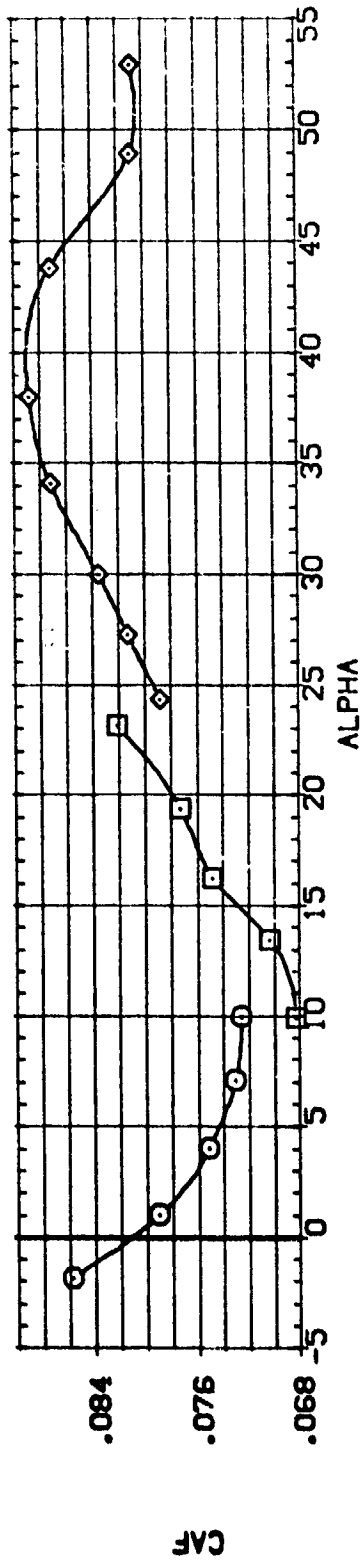
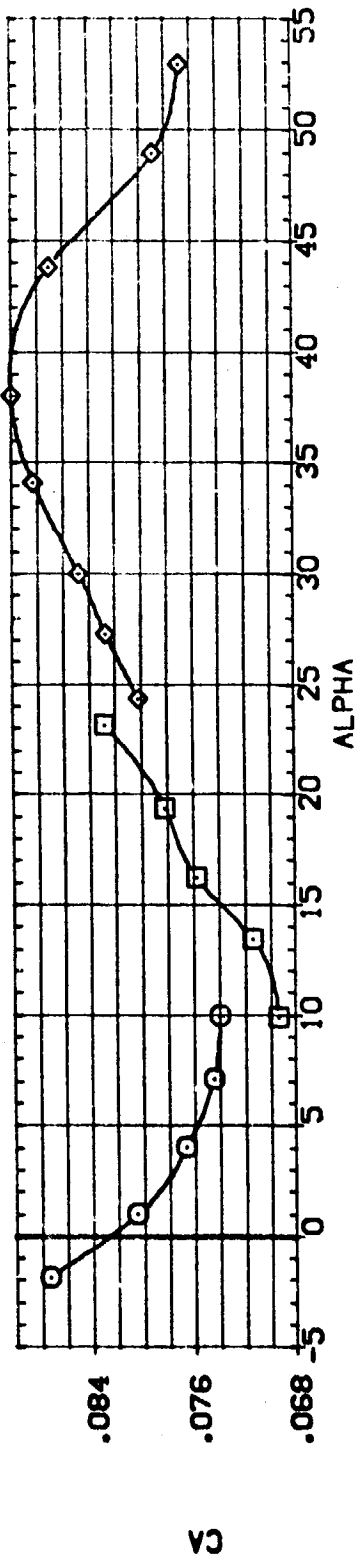


FIG. 1.B MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32



DATA SET SYMBOL
(BBX007)
(BBX008)
(BBX009)

CONFIGURATION DESCRIPTION
AVES 3.5-160 CA 1B (B10F4C507H348) (W87E18) (V5R5)
AVES 3.5-160 CA 1B (B10F4C507H348) (W87E18) (V5R5)
AVES 3.5-160 CA 1B (B10F4C507H348) (W87E18) (V5R5)

ELEVON RUDDER SPOILER BOFLAP
.000 .000 .000 .000
.000 .000 .000 .000
.000 .000 .000 .000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XREF 1076.4800 IN.
YREF .0000 IN.
ZREF 400.0000 IN.
SCALE .0150

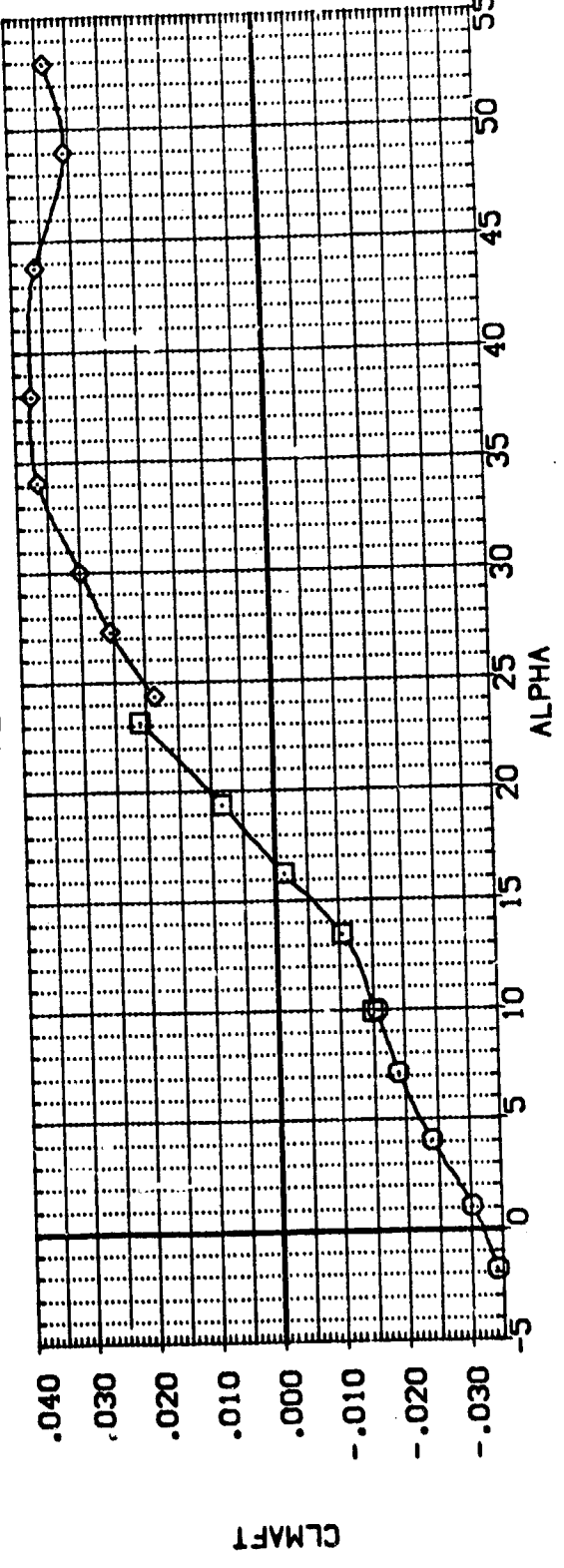
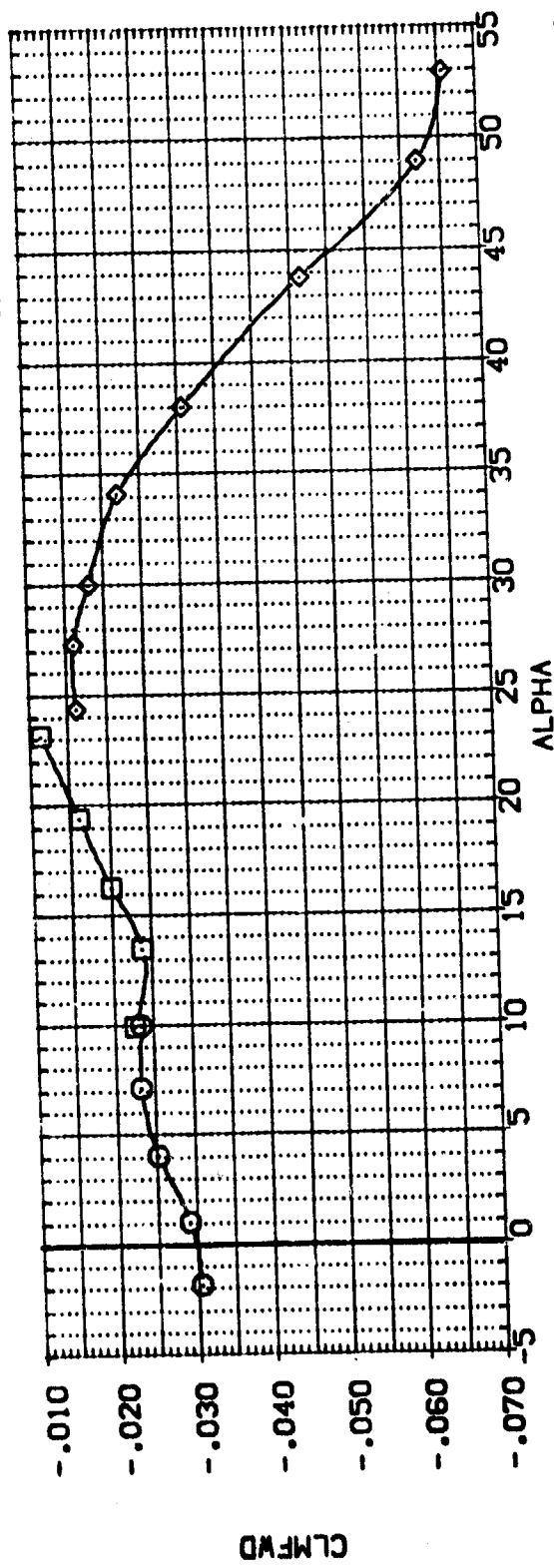


FIG. 1.B MACH 7.32 BASELINE CHARACTERISTICS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION	SO.F.T.
(BBK007)	AVES 3.5-160 CA11B (B1D4C507M3N8)(V87E16)(V5K5)	.000	.000	54.920	-14.250	SREF	2690.0000
(BBK008)	AVES 3.5-160 CA11B (B1D4C507M3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	LREF	474.8100
(BBK052)	AVES 3.5-160 CA11B (B1D4C507M3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	CREF	956.6800
						XMRP	1076.4800
						YMRP	.0000
						ZMRP	400.0000
						SCALE	.0150

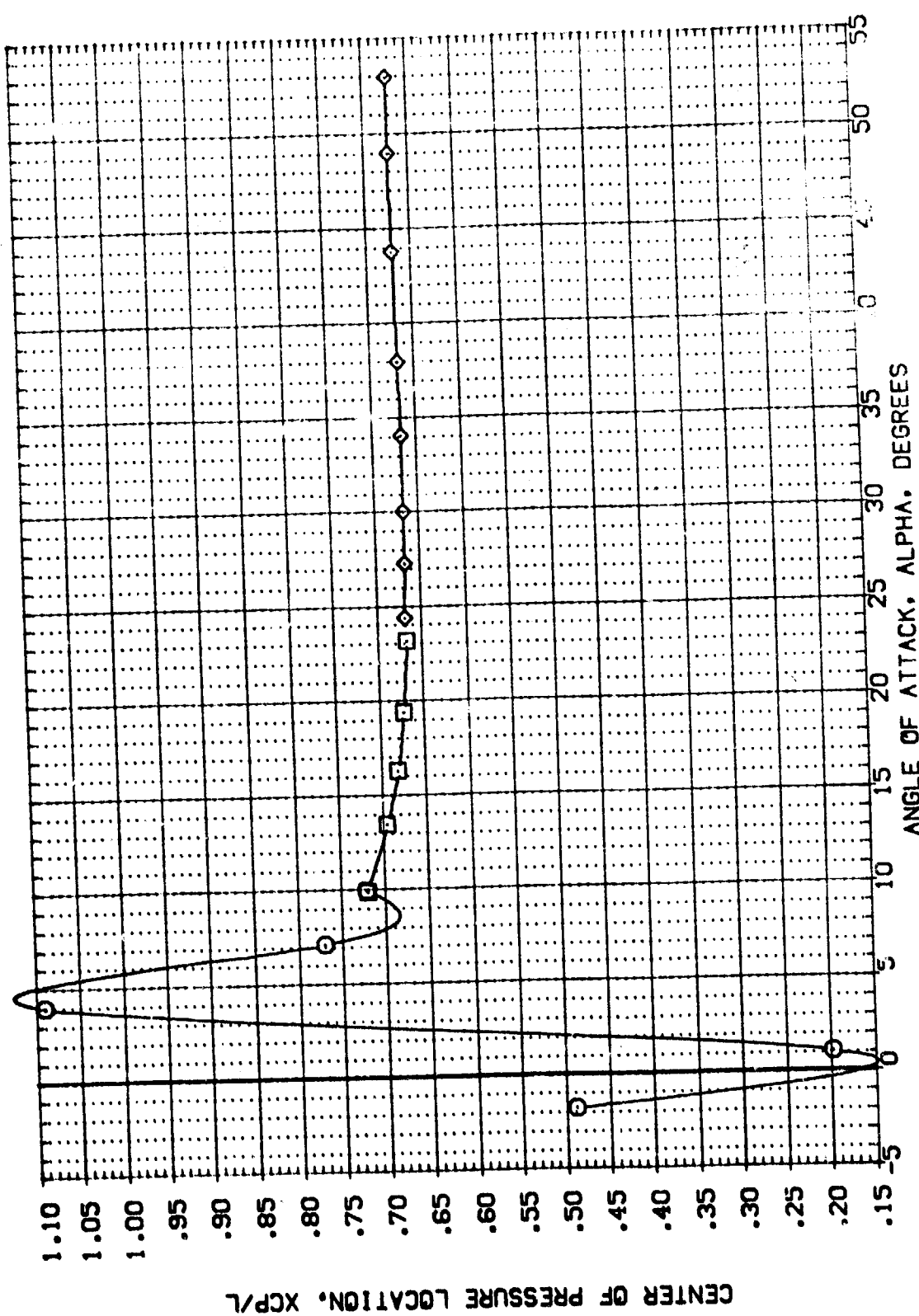


FIG. 1.8 MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPORBR	BD/LAP	REFERENCE INFORMATION
(BBK007)	AMES 3.5-160 CA11B (B10F4C507)(N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBK008)	AMES 3.5-160 CA11B (B10F4C507)(N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBK052)	AMES 3.5-160 CA11B (B10F4C507)(N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	BREF 936.6900 IN.
						YMRP 1076.4800 IN.
						ZMRP .0000 IN.
						SCALE 400.0000 IN.
						.0150

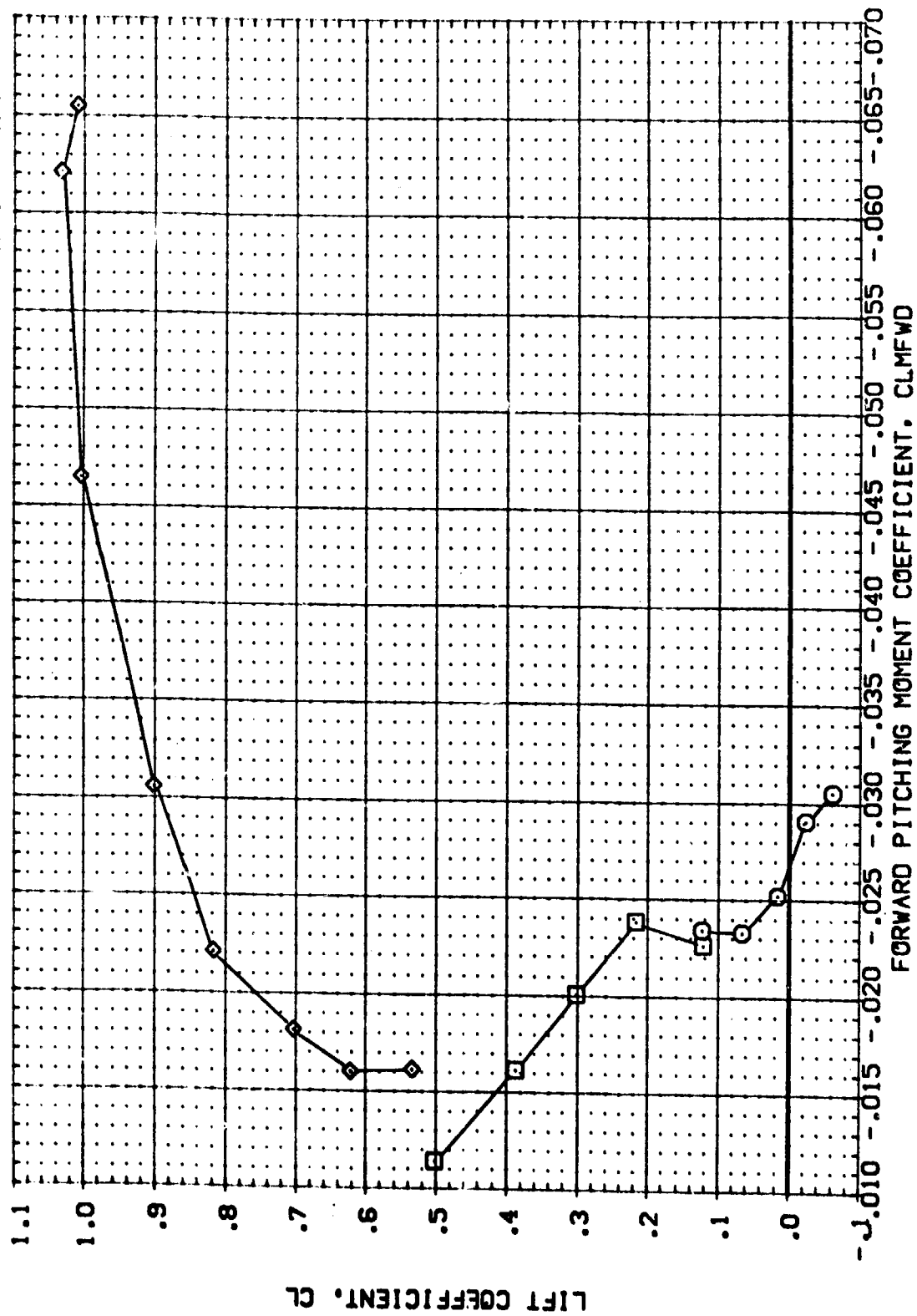


FIG. 1.B MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBK007)	AVES 3.5-160 CA118 (B10F4C5D7H3N8)(V87E18)(V5N5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBK008)	AVES 3.5-160 CA118 (B10F4C5D7H3N8)(V87E18)(V5N5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBK052)	AVES 3.5-160 CA118 (B10F4C5D7H3N8)(V87E18)(V5N5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

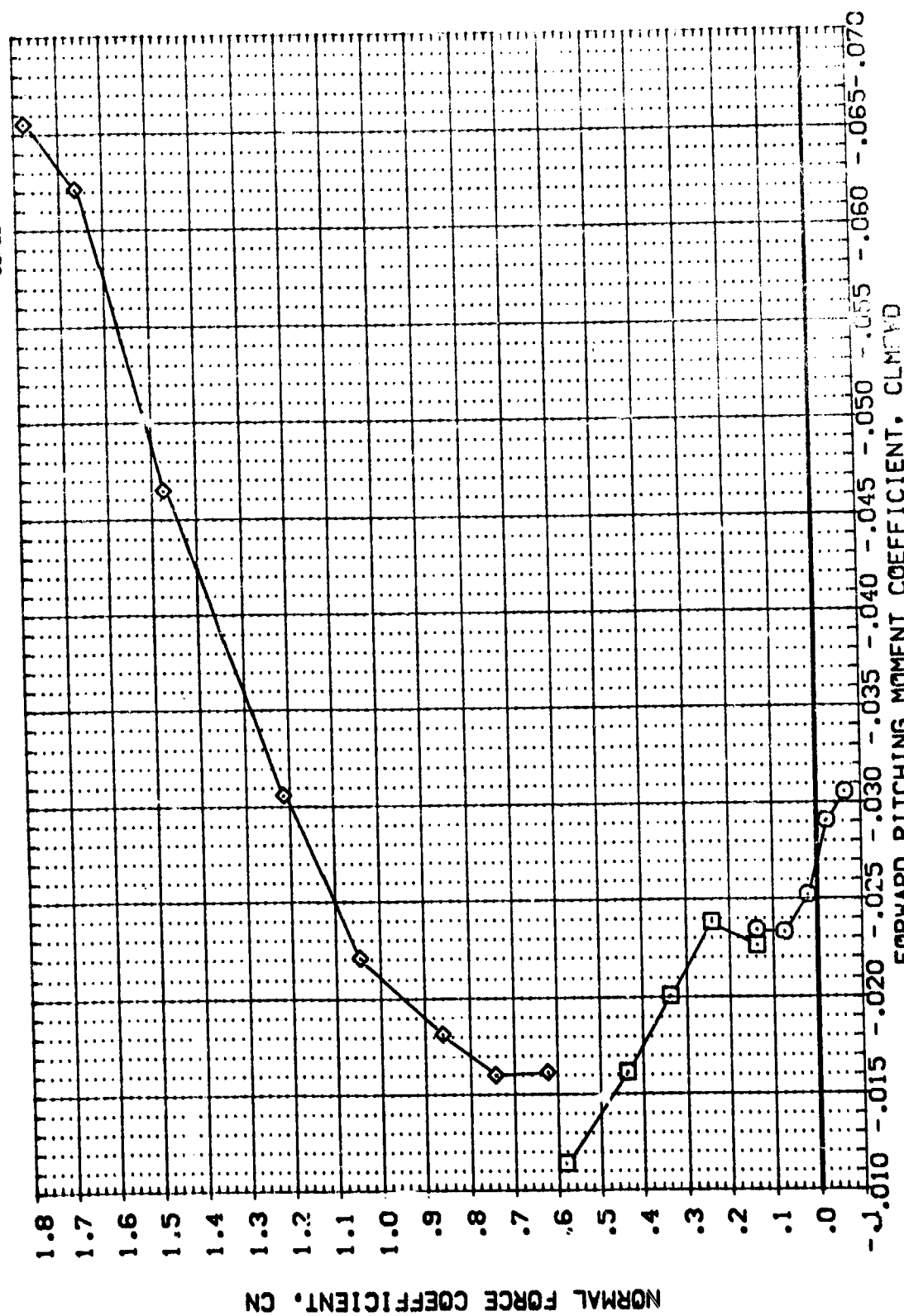


FIG. 1.8 MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPDRK	BDFLAP	REFERENCE INFORMATION
(BBX007)	AVES 3.5-160 DAI1B (B10F4C507H348)(V67E18)(V5K5)	.000	.000	54.920	-14.250	SREF 2690.0000 SO.FT.
(BBX008)	AVES 3.5-160 DAI1B (B10F4C507H348)(V67E18)(V5K5)	.000	.000	54.920	-14.250	LREF 474.8100
(BBX052)	AVES 3.5-160 DAI1B (B10F4C507H348)(V67E18)(V5K5)	.000	.000	54.920	-14.250	BREF 936.6800
						XMRP 1076.4800
						YMRP .0000
						ZMRP .0000
						SCALE .0150

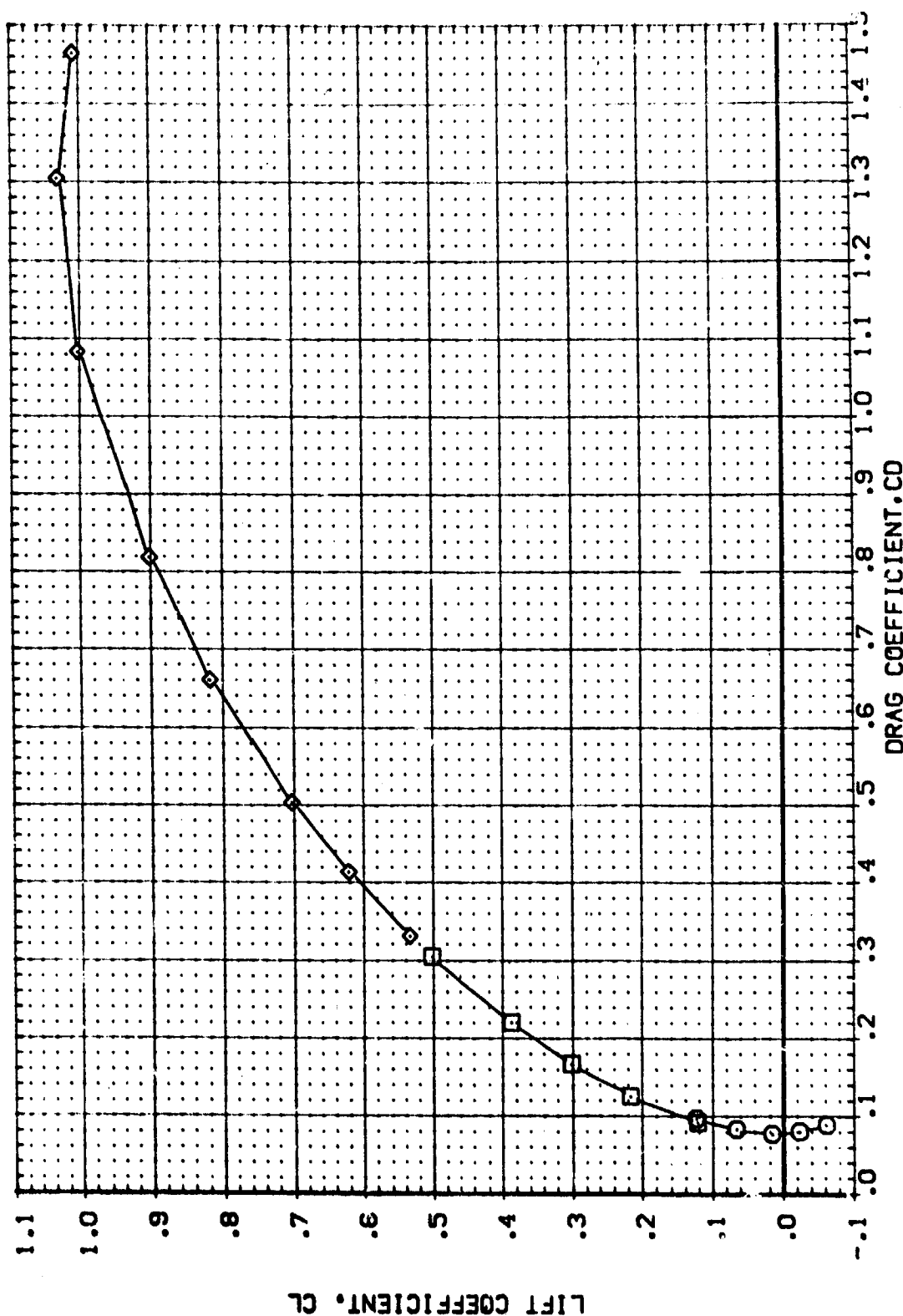



FIG. 1.B MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32

DATA SET SYMBOL:  CONFIGURATION DESCRIPTION: ARES 3-5-160 CA11B (810F4C507K-GN8)(V87E18)(V5RS) ARES 3-5-160 CA11B (810F4C507K-GN8)(V87E18)(V5RS) ARES 3-5-160 CA11B (810F4C507K-GN8)(V87E18)(V5RS)

FLYON: .000
FLYON: .000
FLYON: .000

RUDER: .000
RUDER: .000
RUDER: .000

SPOBRK: 54.920
SPOBRK: 54.920
SPOBRK: 54.920

BDLAP: -14.250
BDLAP: -14.250
BDLAP: -14.250

REFERENCE INFORMATION: SREF: 2690.0000 SO.FT.: 50.0000 LREF: 474.8100 IN.: 1.0000 BREF: 936.5800 IN.: 1.0000 YPRP: 1076.4800 IN.: 1.0000 ZPRP: 400.0000 IN.: 1.0000 SCALE: .0150

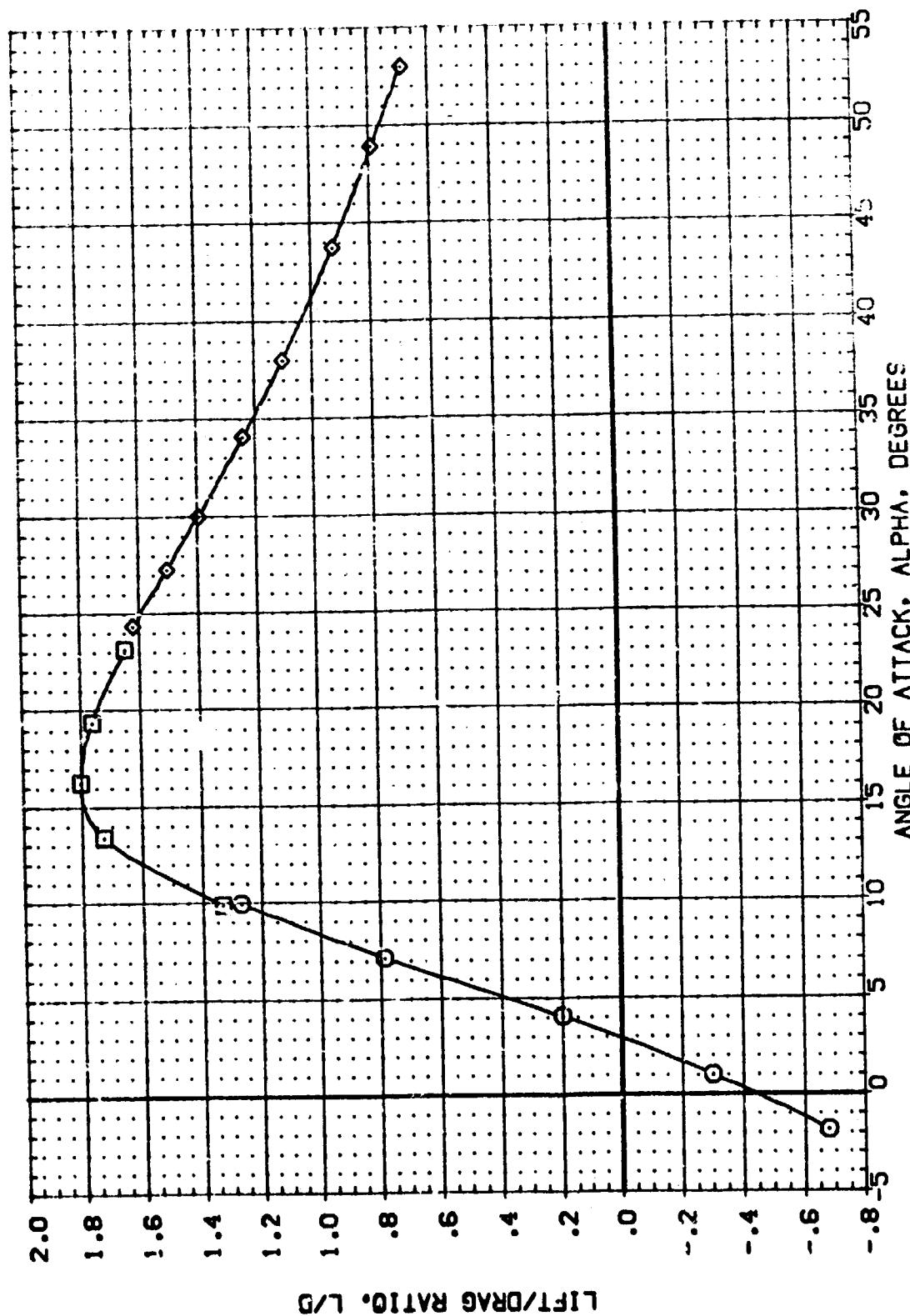


FIG. 1.B MACH 7.32 BASELINE CHARACTERISTICS

(A)MACH = 7.32

DATA SET SYMBOL: (BBX050) (BBX057) (BBX058) (BBX059)

CONFIGURATION DESCRIPTION: AYES 3.5-160 DA11B (B10F4C507M3-8) (V87E18) (V5RS) AYES 3.5-160 DA11B (B10F4C507M3-8) (V87E18) (V5RS) AYES 3.5-160 DA11B (B10F4C507M3-8) (V87E18) (V5RS) AYES 3.5-160 DA11B (B10F4C507M3-8) (V87E18) (V5RS)

ELEVON RUDDER SP08%K BOFLAP

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.9100 IN. BREF 933.6800 IN. XREF 1076.4800 IN. YREF 400.0000 IN. ZREF 400.0000 IN. SCALE .0150

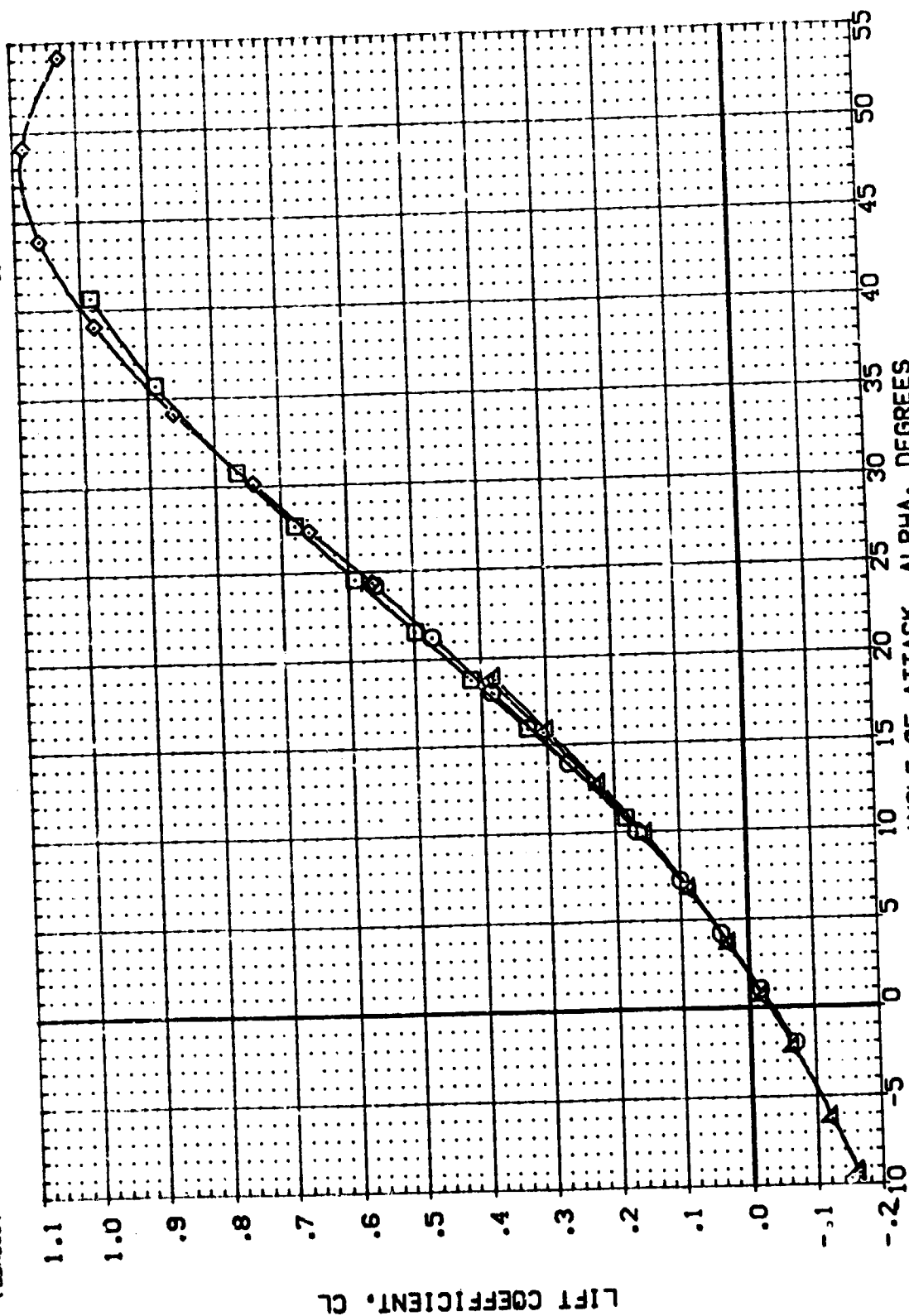


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOON	BOFLAP	REFERENCE INFORMATION
(BB0050)	AVES 3.5-180 DA118 (810°4C5073-8) (V87E18) (V87E18)	.000	.000	54.920	-14.250	SREF 2680.0000 SO.FT. IN.
(BB0057)	AVES 3.5-180 DA118 (810°4C5073-8) (V87E18) (V87E18)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BB0077)	AVES 3.5-180 DA118 (810°4C5073-8) (V87E18) (V87E18)	.000	.000	54.920	-14.250	BREF 936.8800 IN.
(BB0077)	AVES 3.5-180 DA118 (810°4C5073-8) (V87E18) (V87E18)	.000	.000	54.920	-14.250	XREF 1076.4800 IN.
(BB0088)	AVES 3.5-180 DA118 (810°4C5073-8) (V87E18) (V87E18)	.000	.000	54.920	-14.250	YREF 100.0000 IN.
(BB0088)	AVES 3.5-180 DA118 (810°4C5073-8) (V87E18) (V87E18)	.000	.000	54.920	-14.250	ZREF 100.0000 IN.
						SCALE .0150

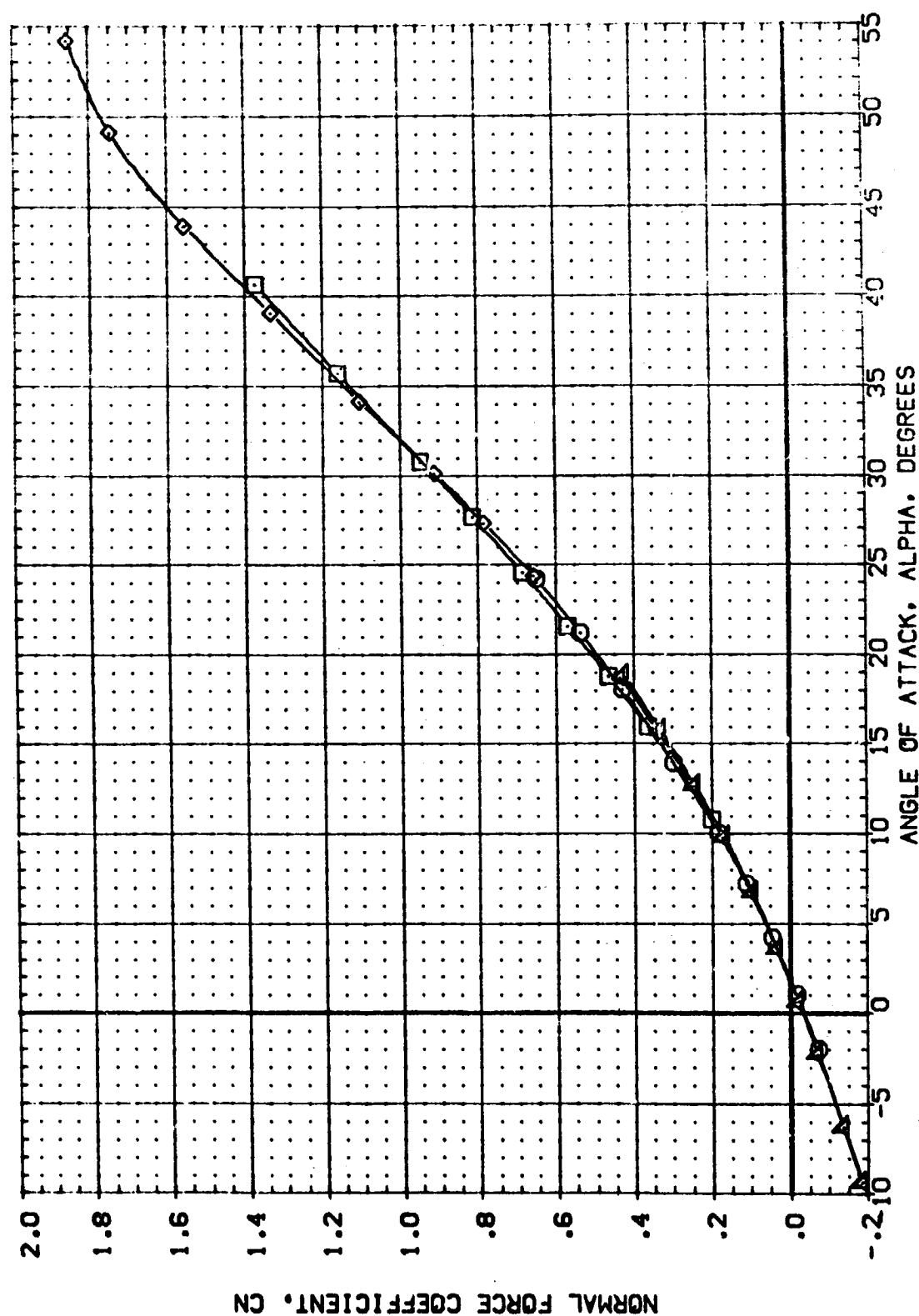


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	S ² OBK	BOFLAP	REFERENCE INFORMATION
(88X050)	AVES 3.5-160 CA118 (B10F4C507K348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(88X051)	AVES 3.5-160 CA118 (B10F4C507K348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 N.
(88X052)	AVES 3.5-160 CA118 (B10F4C507K348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	BREF 936.6800 N.
(88X053)	AVES 3.5-160 CA118 (B10F4C507K348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	XMRP 1076.4800 N.
(88X054)	AVES 3.5-160 CA118 (B10F4C507K348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	YMRP .0000 N.
(88X055)	AVES 3.5-160 CA118 (B10F4C507K348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	ZMRP 400.0000 N.
						SCALE .0150

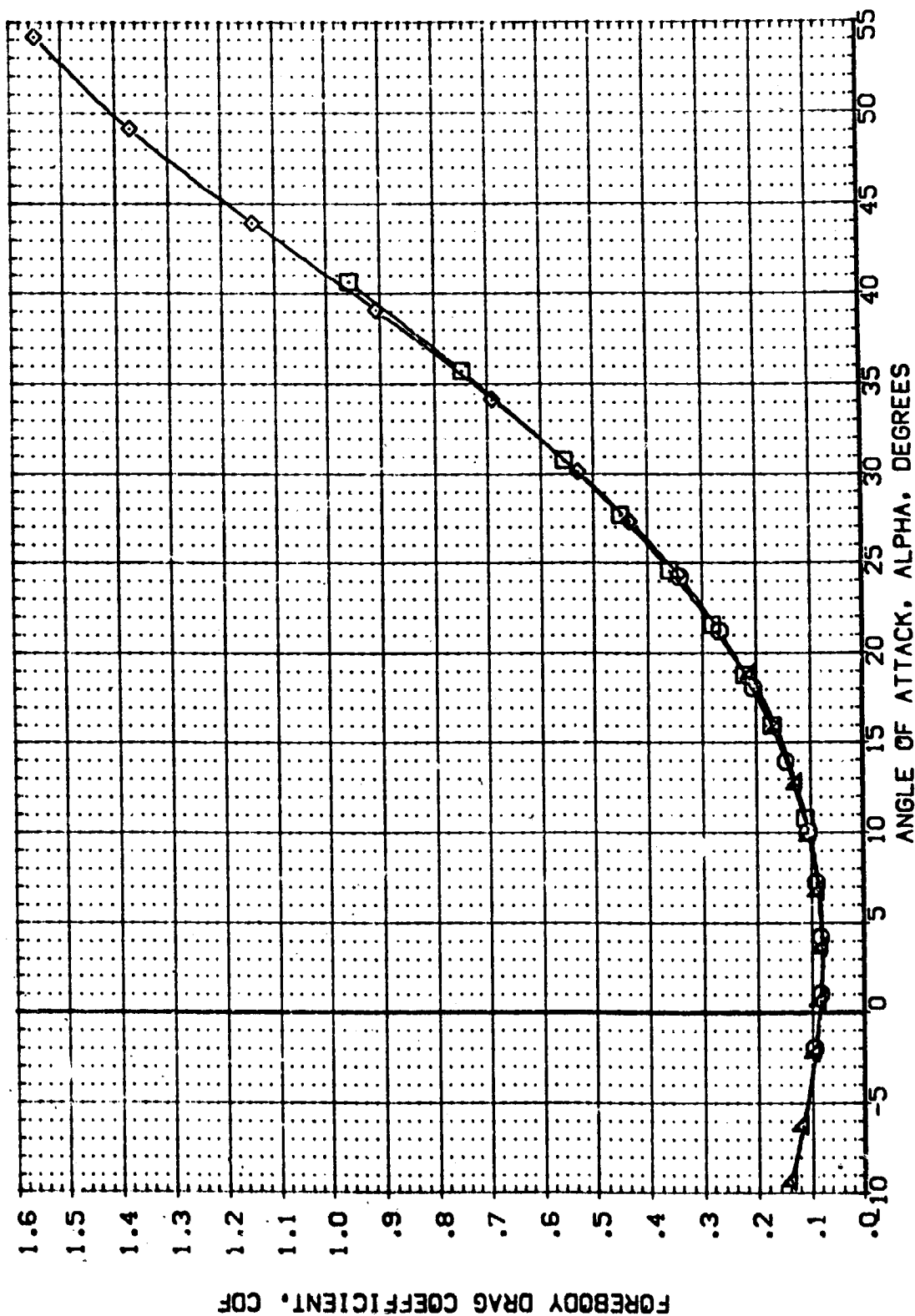


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOON	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 CA11B (B10F4C507H3V8)(V87E18)(V5RS)	.000	.000	SA.920	-14.250	SREF 2690.0100 SQ.FT.
(BBX057)	AVES 3.5-160 CA11B (B10F4C507H3V8)(V87E18)(V5RS)	.000	.000	SA.920	-14.250	LREF 474.8100 IN.
(BBX067)	AVES 3.5-160 CA11B (B10F4C507H3V8)(V87E18)(V5RS)	.000	.000	SA.920	-14.250	BREF 936.8800 IN.
(BBX068)	AVES 3.5-160 CA11B (B10F4C507H3V8)(V87E18)(V5RS)	.000	.000	SA.920	-14.250	XREF 1076.4900 IN.
(BBX069)	AVES 3.5-160 CA11B (B10F4C507H3V8)(V87E18)(V5RS)	.000	.000	SA.920	-14.250	YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

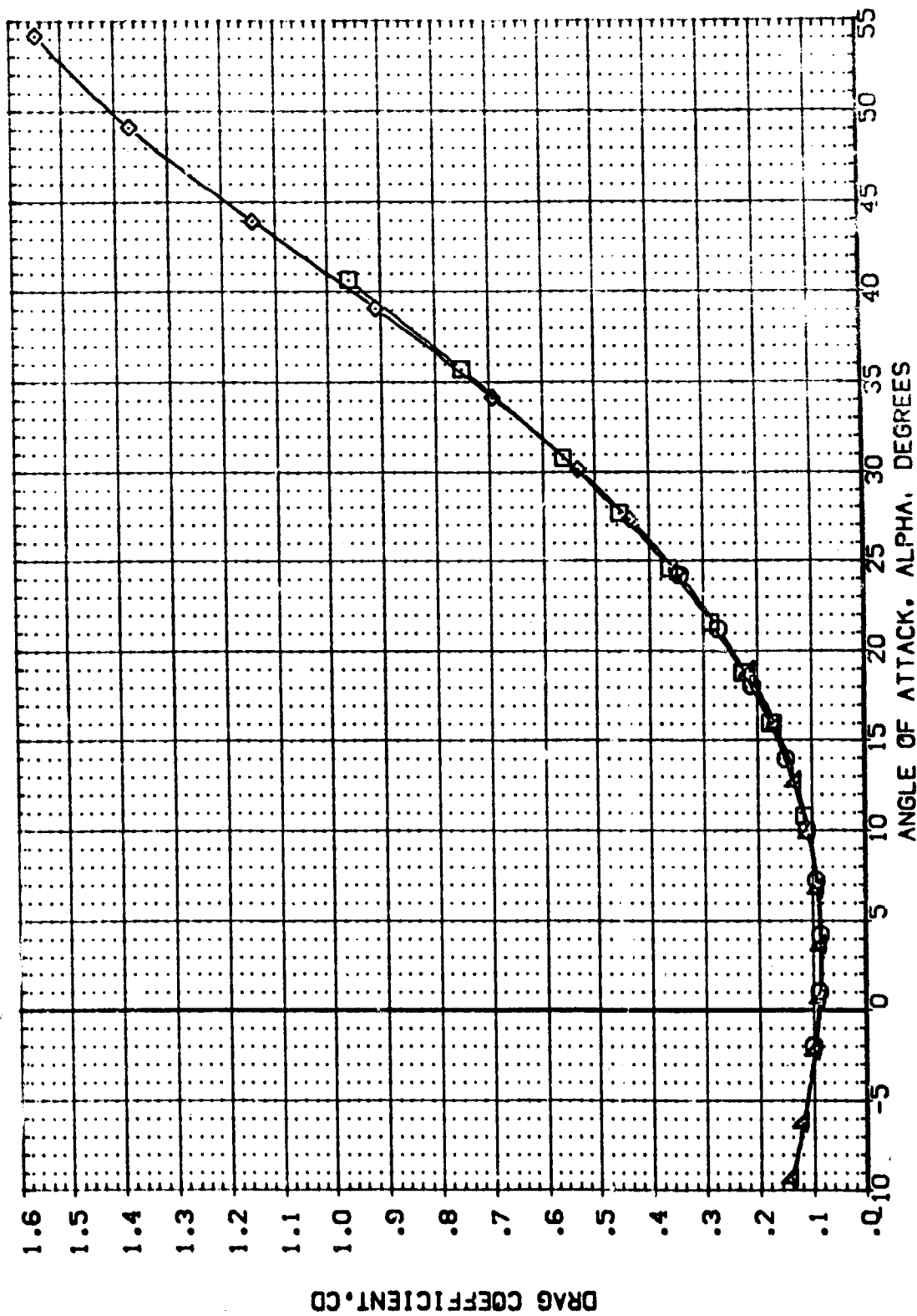


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 (BIDF4C507H-38)(V87E 8)(V58S)	.000	.000	54.920	-14.250	SREF 2690.0000 SO.FT.
(BBX057)	AVES 3.5-160 (BIDF4C507H-38)(V87E 8)(V58S)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX047)	AVES 3.5-160 (BIDF4C507H-38)(V87E 8)(V58S)	.000	.000	54.920	-14.250	BREF 936.8800 IN.
(BBX058)	AVES 3.5-160 (BIDF4C507H-38)(V87E 8)(V58S)	.000	.000	54.920	-14.250	XMRP 1076.4800 IN.
(BBX059)	AVES 3.5-160 (BIDF4C507H-38)(V87E 8)(V58S)	.000	.000	54.920	-14.250	YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

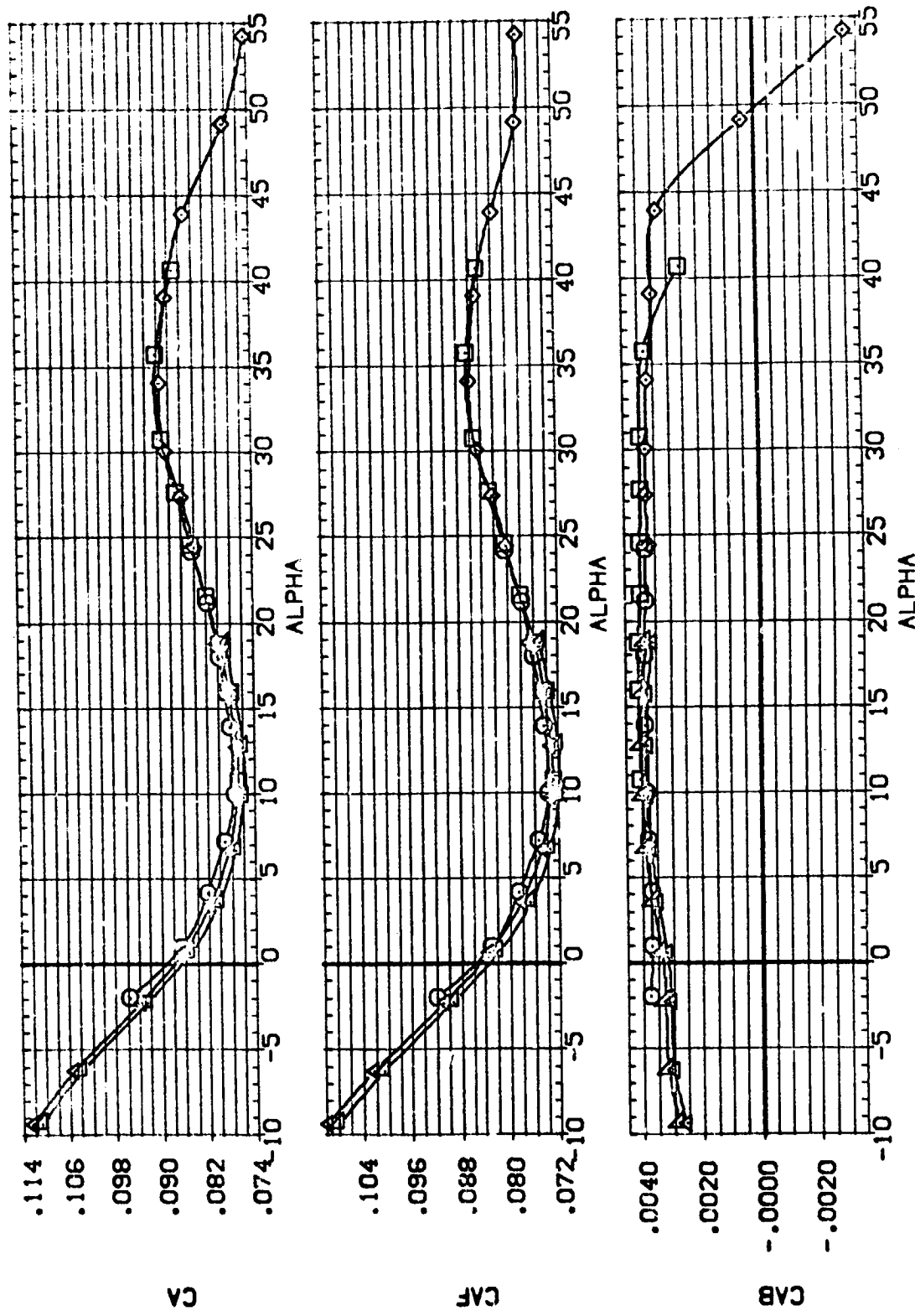


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 CA11B (B10F4C507G3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX057)	AVES 3.5-160 CA11B (B10F4C507G3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX047)	AVES 3.5-160 CA11B (B10F4C507G3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
(BBX058)	AVES 3.5-160 CA11B (B10F4C507G3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	XMRP 1076.4800 IN.
(BBX059)	AVES 3.5-160 CA11B (B10F4C507G3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	YMRP 400.0000 IN.
						ZMRP .0150

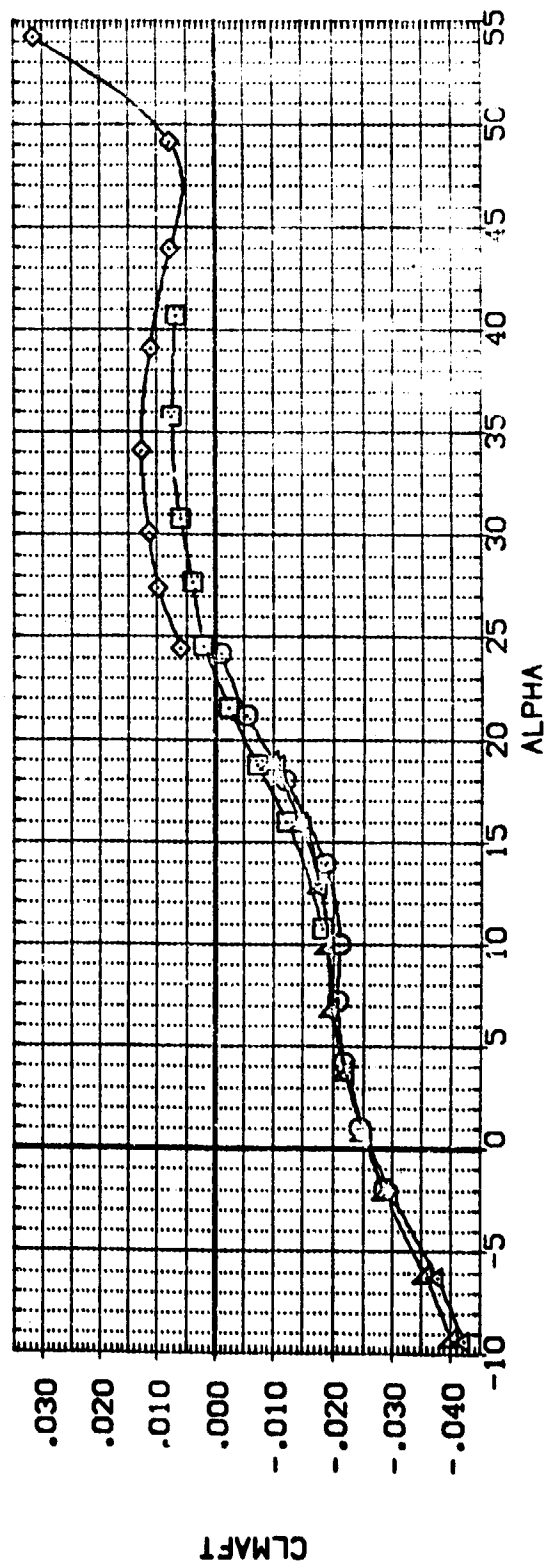
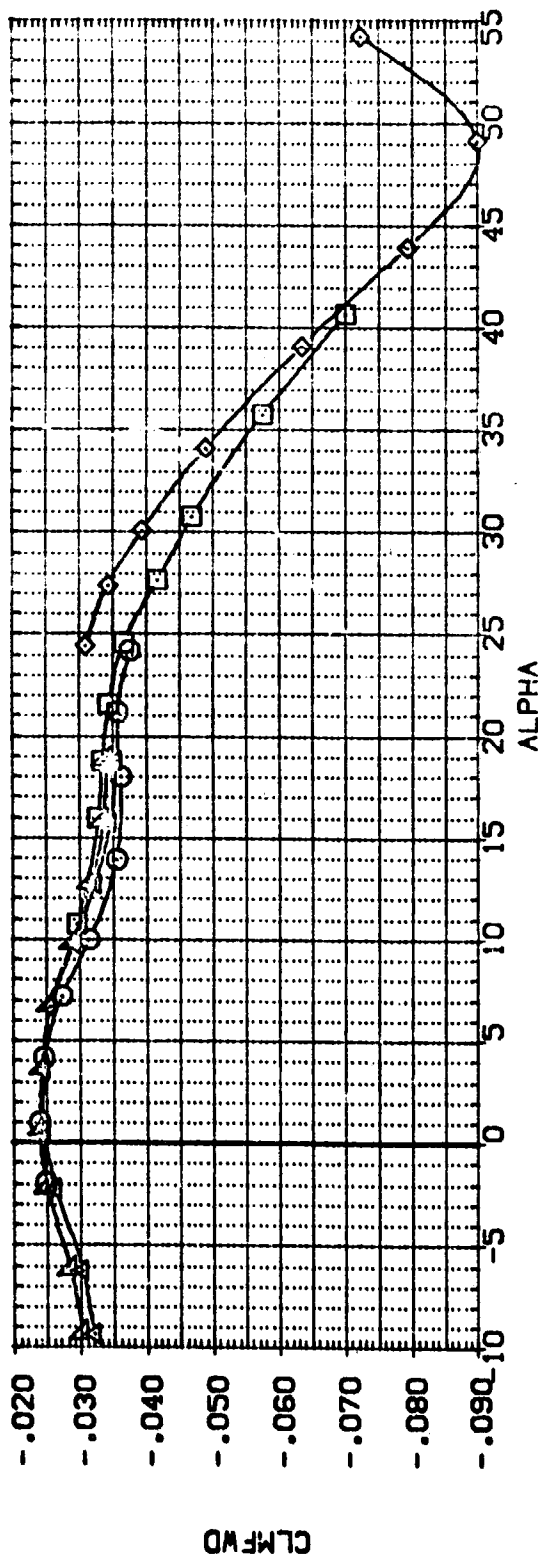


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(B8X050)	AVES 3.5-160 CA11B (B1D4C507M3-4B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(B8X057)	AVES 3.5-160 CA11B (B1D4C507M3-4B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(98XCA7)	AVES 3.5-160 CA11B (B1D4C507M3-4B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6900 IN.
(B8X058)	AVES 3.5-160 CA11B (B1D4C507M3-4B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	XPRP 1076.4300 IN.
(B8X059)	AVES 3.5-160 CA11B (B1D4C507M3-4B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	YPRP 400.0000 IN.
						ZPRP 100.0000 IN.
						SCALE .0150

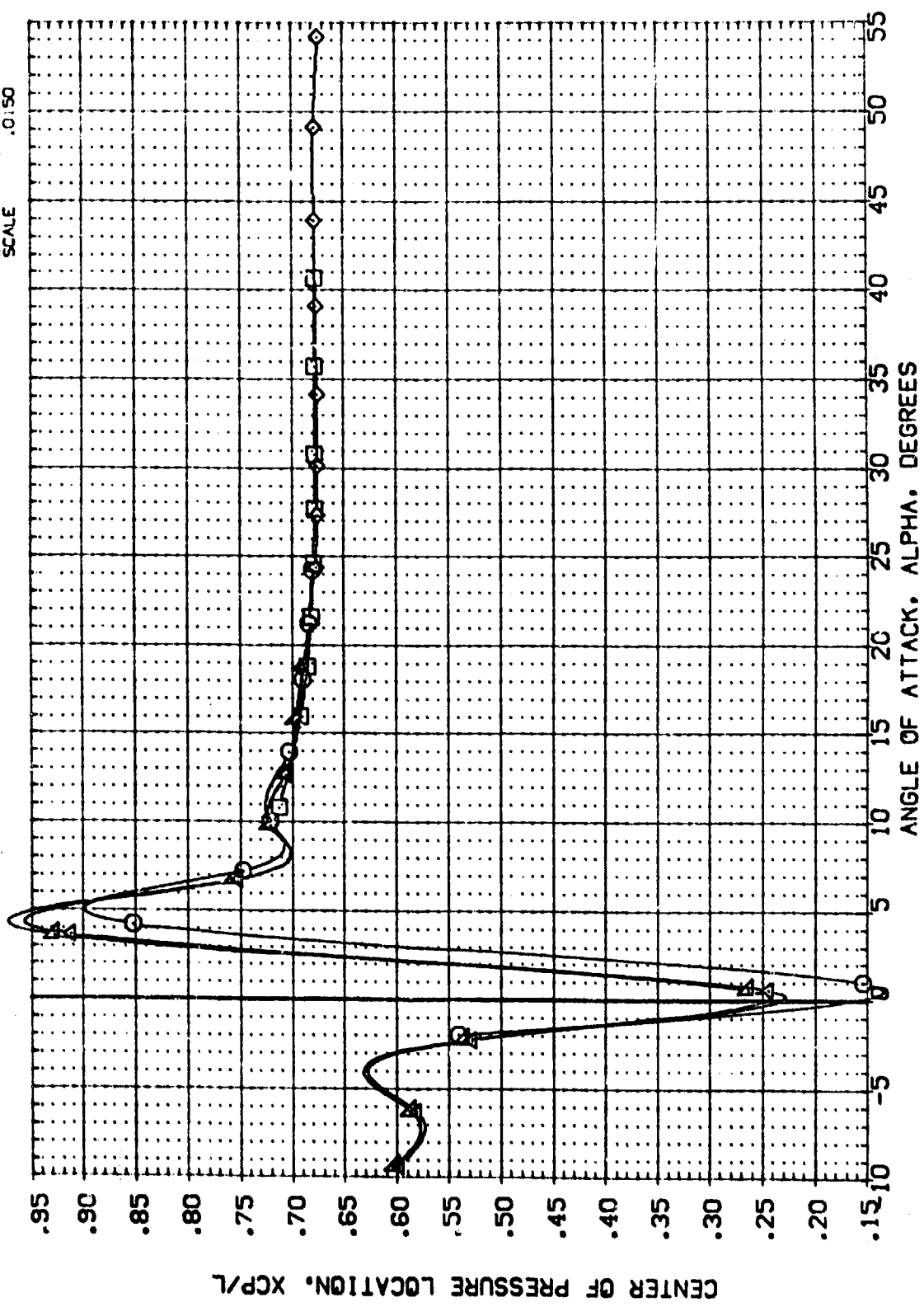
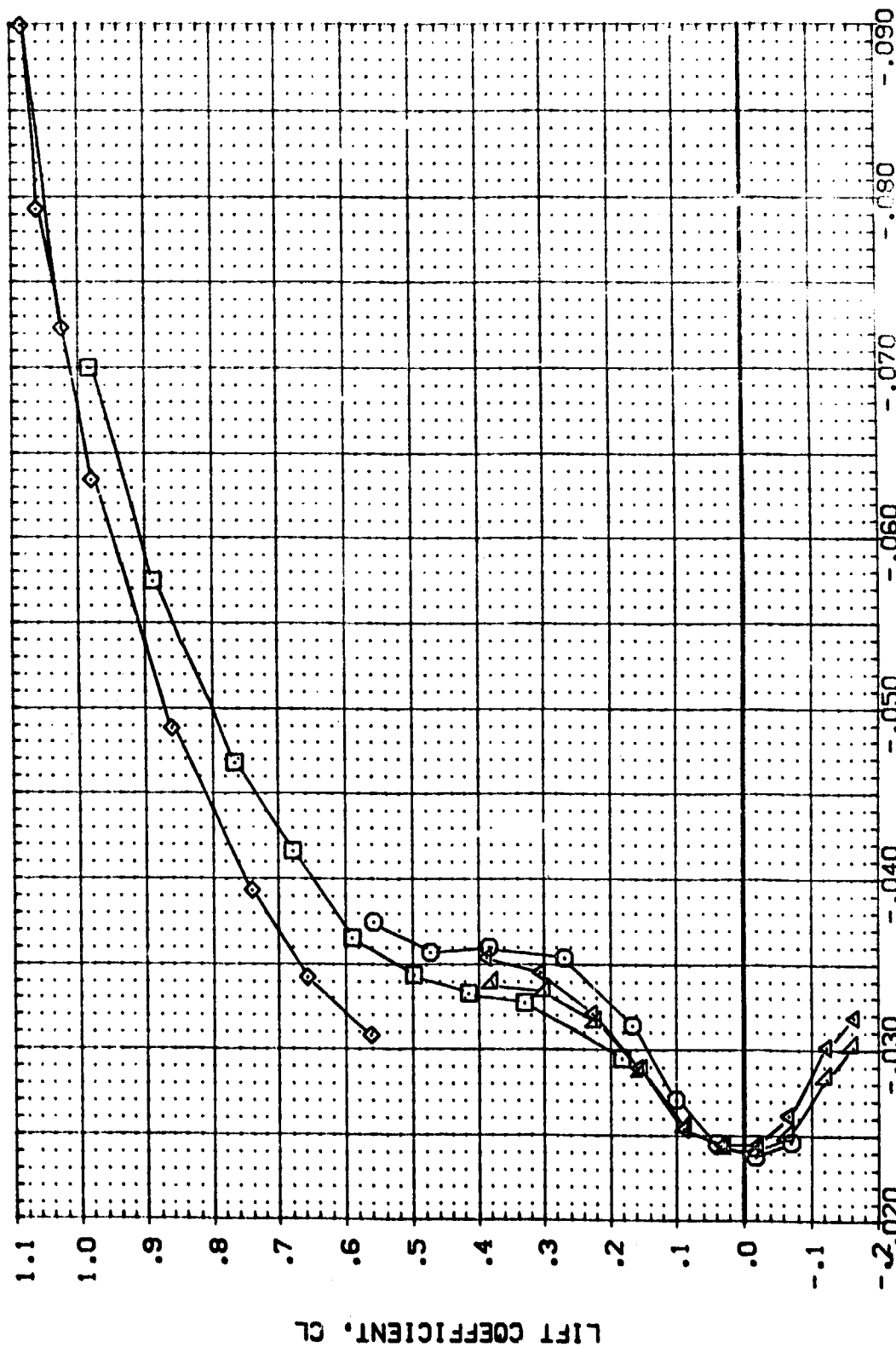


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 DA11B (B10F4C507M3V8)(V87E18)(V5RS)	.000	.000	S4.920	-14.250	SREF 2690.0000
(BBX057)	AVES 3.5-160 DA11B (B10F4C507M3V8)(V87E18)(V5RS)	.000	.000	S4.920	-14.250	UREF 474.8100
(BBX047)	AVES 3.5-160 DA11B (B10F4C507M3V8)(V87E18)(V5RS)	.000	.000	S4.920	-14.250	BREF 936.8800
(BBX058)	AVES 3.5-160 DA11B (B10F4C507M3V8)(V87E18)(V5RS)	.000	.000	S4.920	-14.250	XREF 1076.4800
(BBX059)	AVES 3.5-160 DA11B (B10F4C507M3V8)(V87E18)(V5RS)	.000	.000	S4.920	-14.250	YREF 400.0000
						ZREF 400.0000
						SCALE .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 DA11B (B1D4CS07M3-8) (V87E18) (V5K5)	.000	.000	54.920	-14.250	SREF 2630.0000 SQ.FT.
(BBX057)	AVES 3.5-160 DA11B (B1D4CS07M3-8) (V87E18) (V5K5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX047)	AVES 3.5-160 DA11B (B1D4CS07M3-8) (V87E18) (V5K5)	.000	.000	54.920	-14.250	BREF 936.6900 IN.
(BBX068)	AVES 3.5-160 DA11B (B1D4CS07M3-8) (V87E18) (V5K5)	.000	.000	54.920	-14.250	XMRP 1076.4800 IN.
(BBX063)	AVES 3.5-160 DA11B (B1D4CS07M3-8) (V87E18) (V5K5)	.000	.000	54.920	-14.250	YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

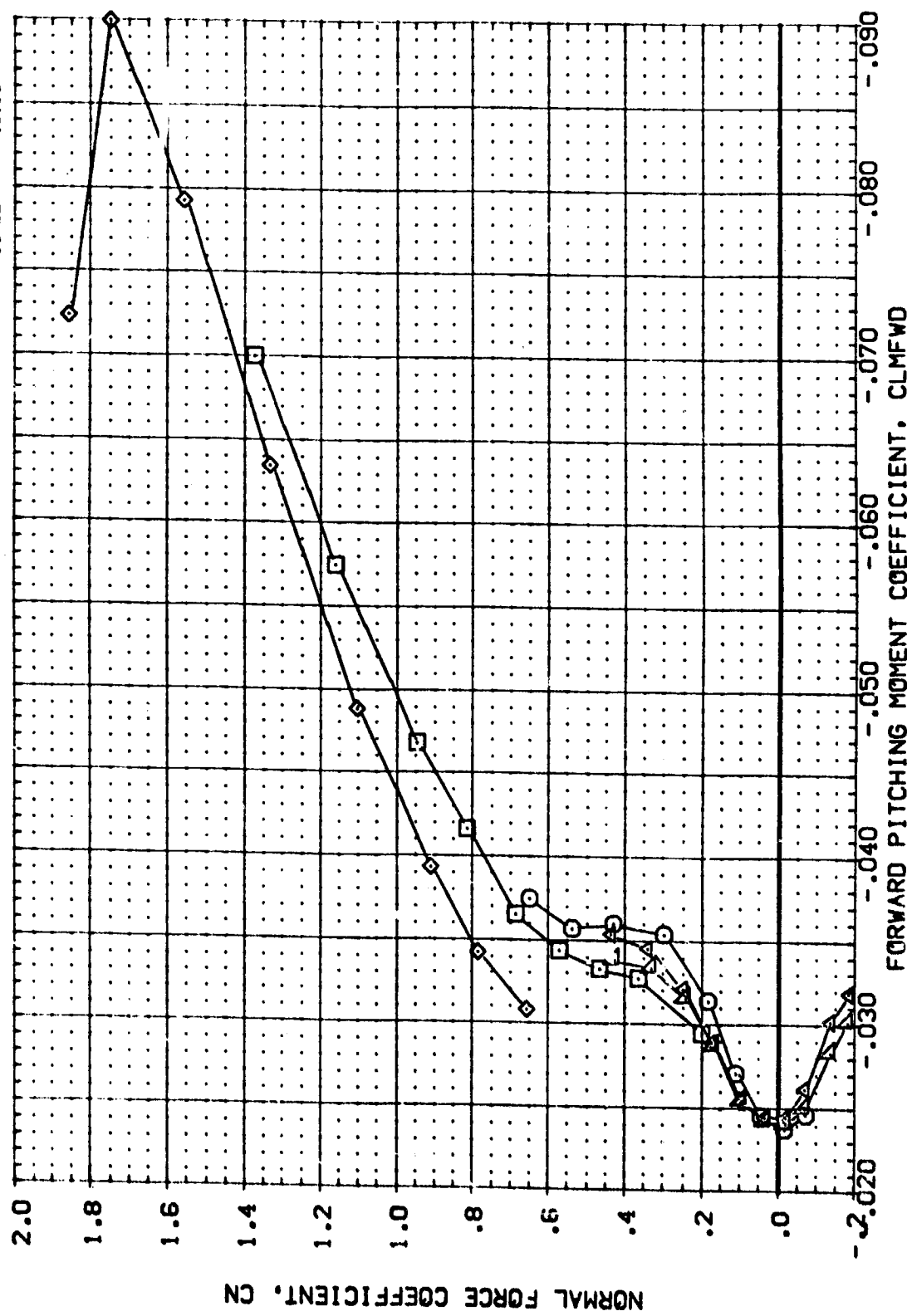


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION	SO.FT.
(BB4050)	AMES 3.5-160 CA118 (B10F4C507GN8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	SREF 2690.0000	IN.
(BB4057)	AMES 3.5-160 CA118 (B10F4C507GN8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	LREF 474.8100	IN.
(BB4047)	AMES 3.5-160 CA118 (B10F4C507GN8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	BREF 936.6800	IN.
(BB4068)	AMES 3.5-160 CA118 (B10F4C507GN8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	YMRP 1076.4800	IN.
(BB4069)	AMES 3.5-160 CA118 (B10F4C507GN8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	ZMRP 400.0000	IN.
						SCALE .0150	

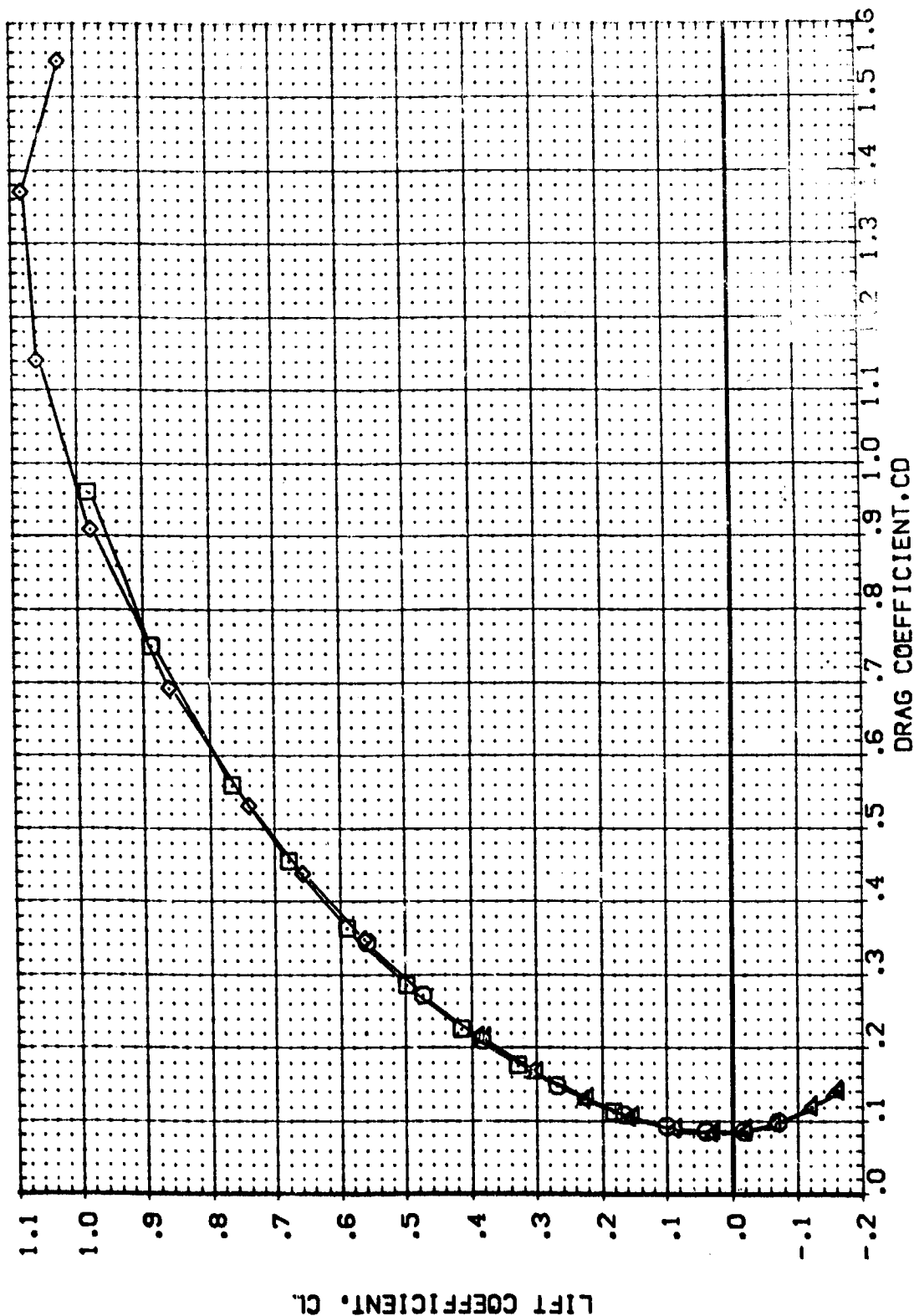


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

CA/MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRBK	BOFLAP	REFERENCE INFORMATION
(ABX050)	AVES 3.5-150 (810F4C507H348)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(ABX057)	AVES 3.5-150 (810F4C507H348)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(ABX047)	AVES 3.5-150 (810F4C507H348)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6900 IN.
(ABX058)	AVES 3.5-150 (810F4C507H348)(V87E18)(V5RS)	.000	.000	54.920	-14.250	XTRP 1076.1900 IN.
(ABX059)	AVES 3.5-150 (810F4C507H348)(V87E18)(V5RS)	.000	.000	54.920	-14.250	ZTRP 400.0000 IN.
						SCALE .0150

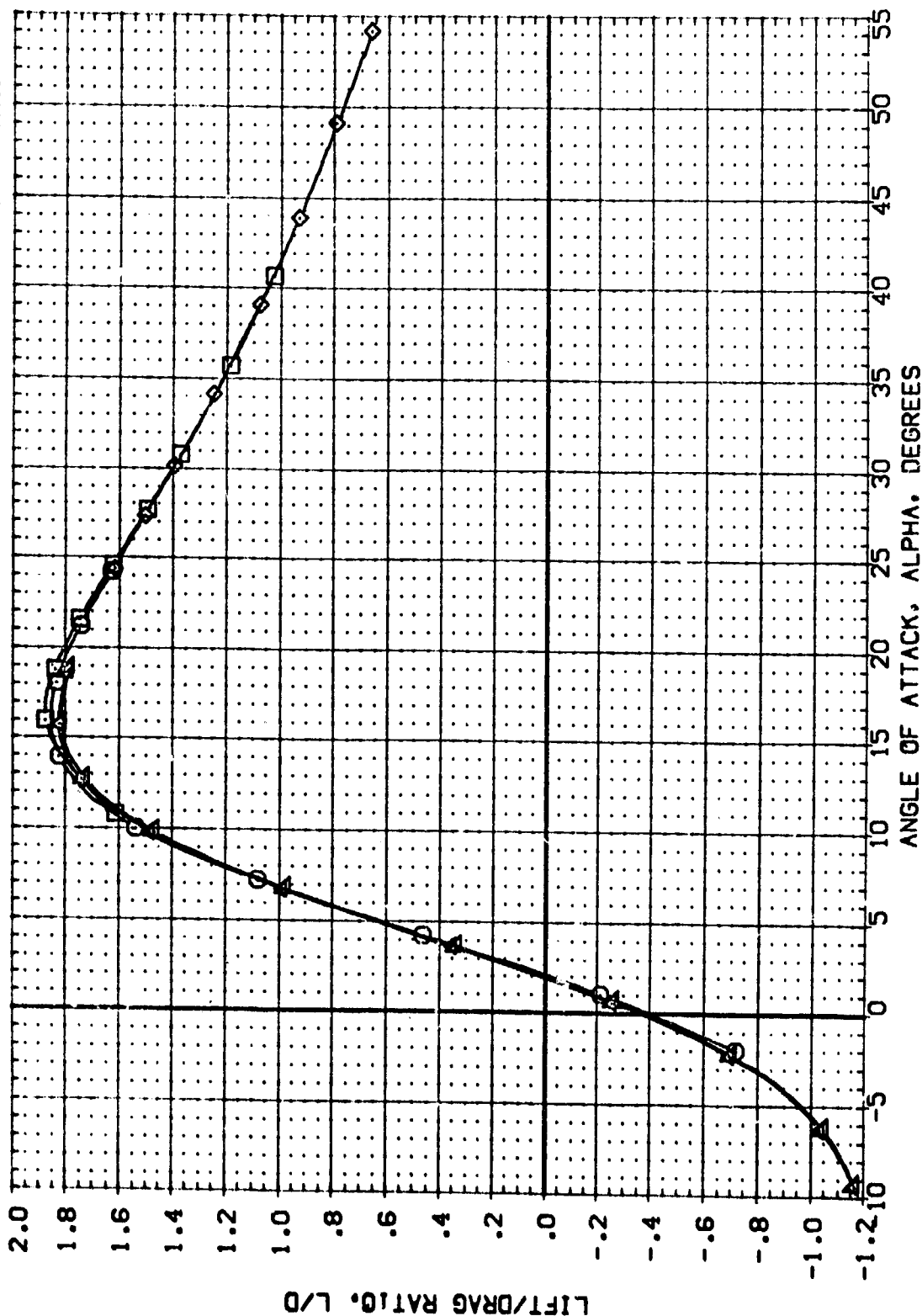


FIG. 2.A.1 MACH 5.26 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
[BBX007]	AVES 3.5-160 DA11B (B1DF4C507H3-8)(V87E18)(V59S)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
[BBX008]	AVES 3.5-160 DA11B (B1DF4C507H3-8)(V87E18)(V59S)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
[BBX052]	AVES 3.5-160 DA11B (B1DF4C507H3-8)(V87E18)(V59S)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

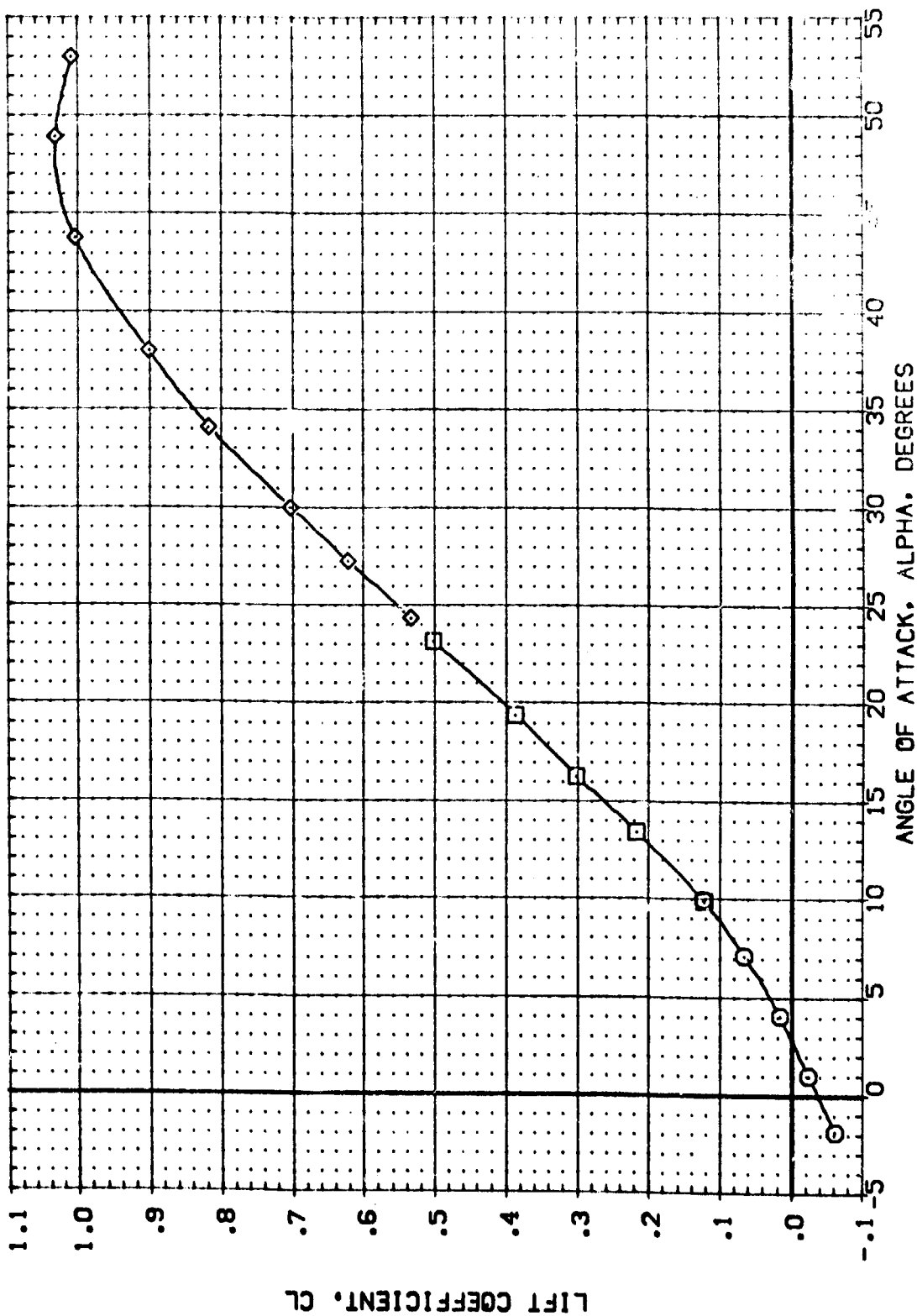


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL: 9900071
 9900028
 9900052

CONFIGURATION: AYES 3.5-150 CA11B (B10F4C507M3-8) (V87E18) (VSRS)
 AYES 3.5-150 CA11B (B10F4C507M3-8) (V87E18) (VSRS)
 AYES 3.5-150 CA11B (B10F4C507M3-8) (V87E18) (VSRS)

ELEVON RUDDER SPOILER BOFLAP
 .000 .000 .000 -14.250
 .000 .000 .000 -14.250
 .000 .000 .000 -14.250

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

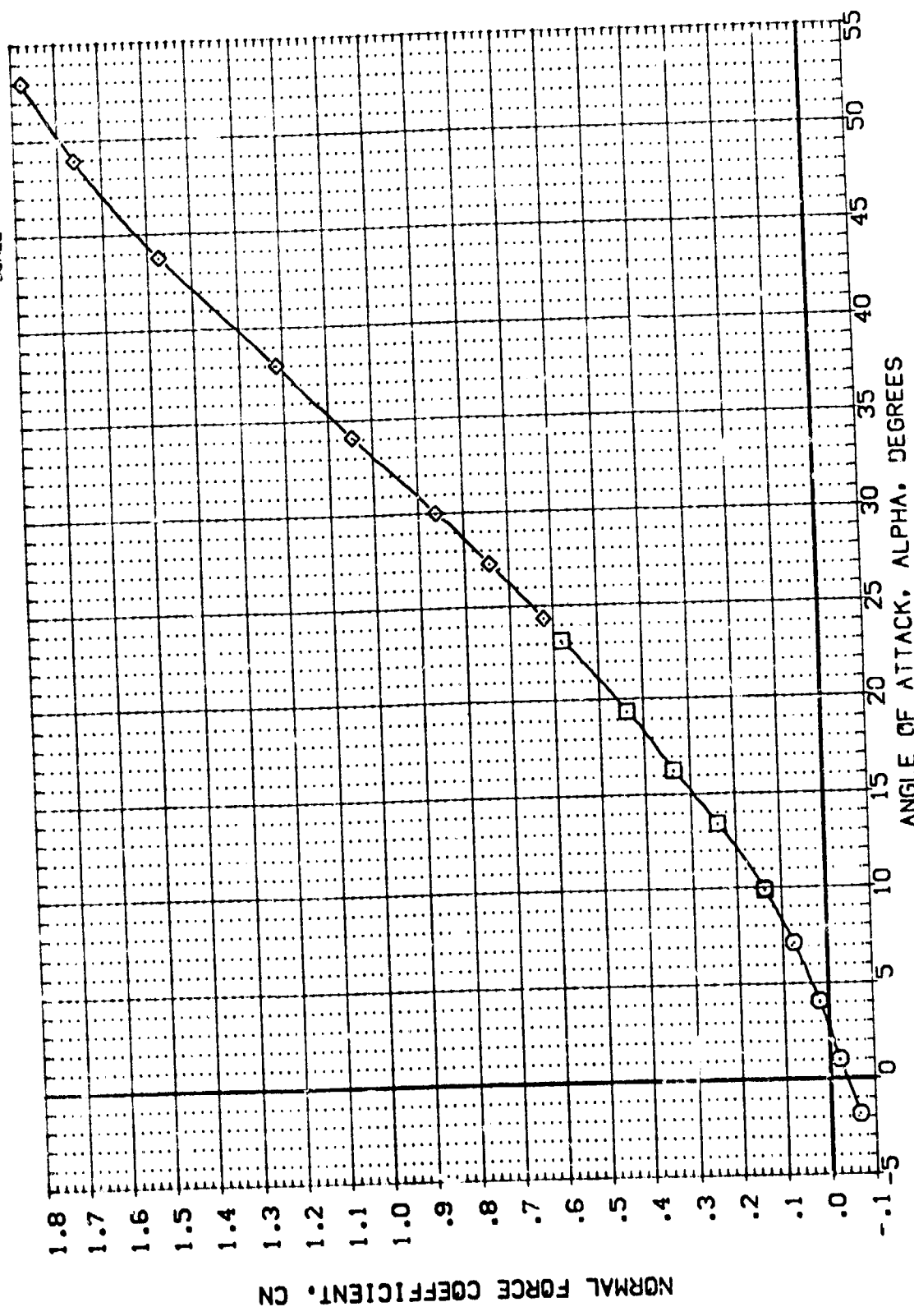
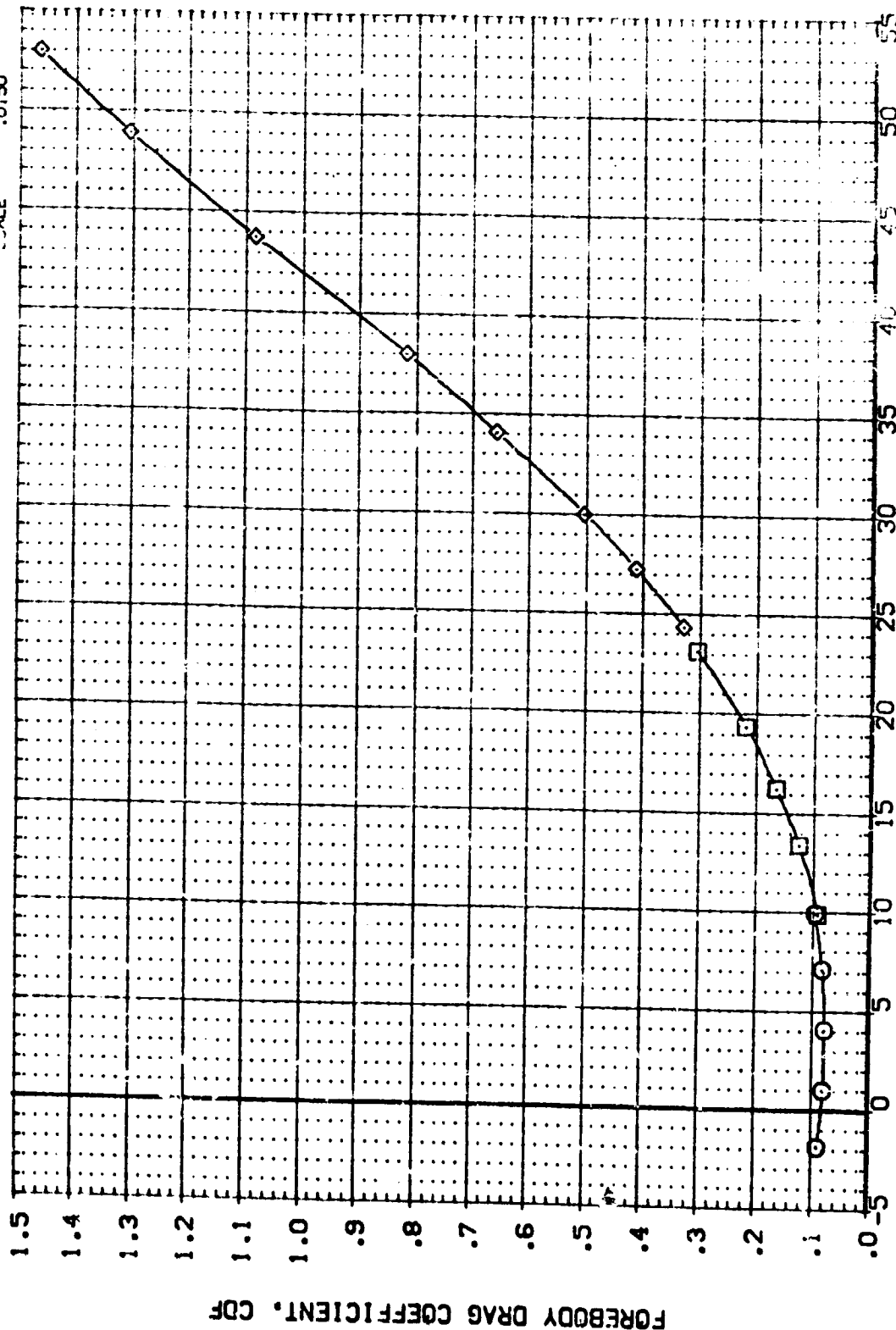


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BDFLAP	REFERENCE INFORMATION
(88V007)	AVES 3.5-160 0A11B (810FAC507K308)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(88V008)	AVES 3.5-160 0A11B (810FAC507K308)(V87E18)(V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(88V052)	AVES 3.5-160 0A11B (810FAC507K308)(V87E18)(V5R5)	.000	.000	54.920	-14.250	BREF 936.6900 IN.
						XMRP 1076.4800 IN.
						YMRP 40J.0000 IN.
						ZMRP 40J.0000 IN.
						SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BBX007) AYES 3.5-160 CALIB (B10F1C5U7) (V87E18) (V5RS)
 (BBX008) AYES 3.5-160 CALIB (B10F1C5U7) (V87E18) (V5RS)
 (BBX052) AYES 3.5-160 CALIB (B10F1C5U7) (V87E18) (V5RS)

ELEVON
 .000
 .000
 .000

RUDDER
 .000
 .000
 .000

SPOILER
 54.920
 54.920
 54.920

BOFLAP
 -14.250
 -14.250
 -14.250

REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 471.8100 IN.
 BREF 935.6600 IN.
 XMRP 1075.4600 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE 400.0000
 .0150

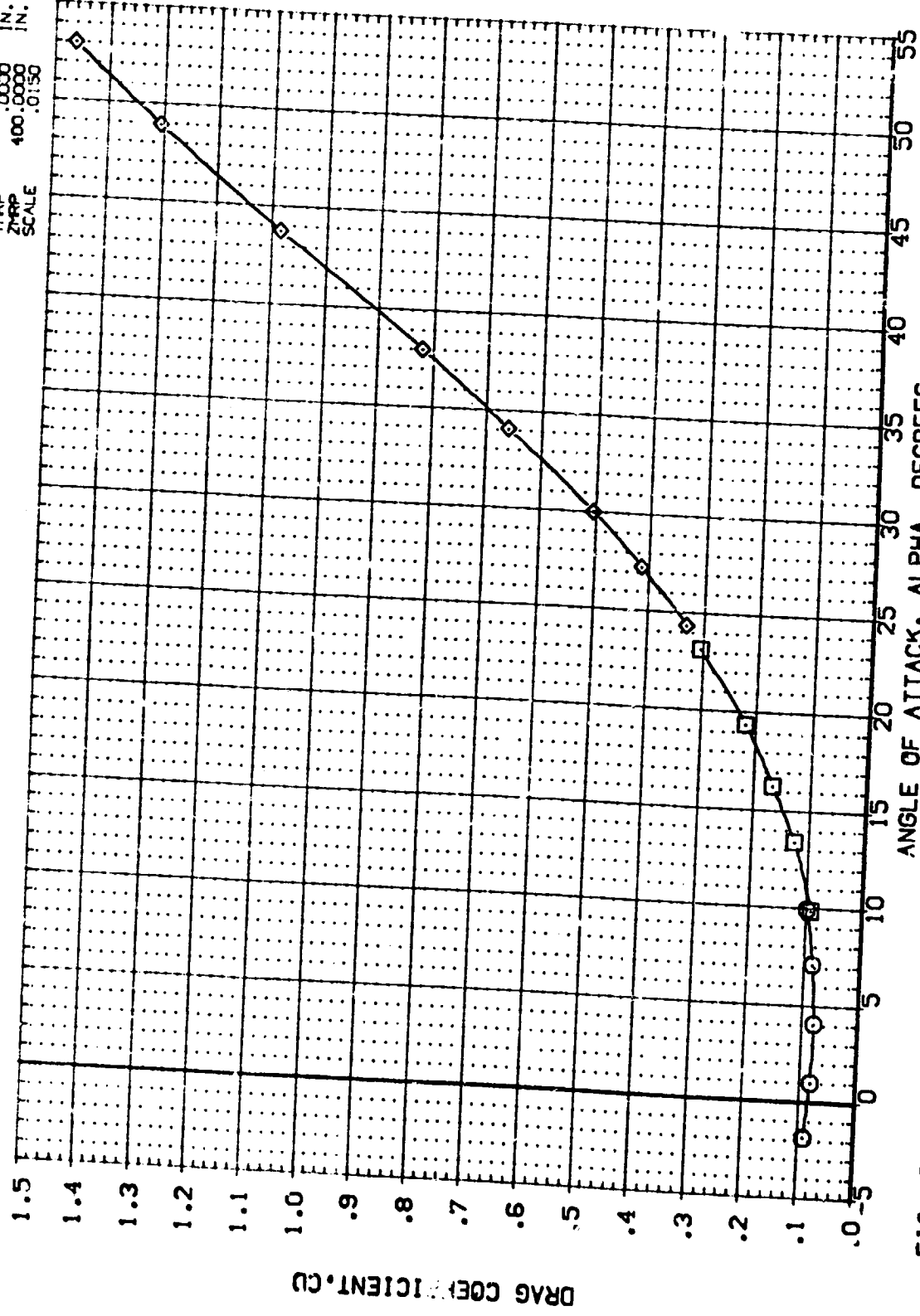


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS
 (A) MACH = 7.32

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BBK007)
(BBK006)
(BBK052)

AVES 3.5-160 GA11B (810F4C507H3-8)(V87E18)(V59S)
AVES 3.5-160 GA11B (810F4C507H3-8)(V87E18)(V59S)
AVES 3.5-160 GA11E (810F4C507H3-8)(V87E18)(V59S)

ELEVON RUDDER SPDBRK BOFLAP
.000 .000 54.920 -14.250
.000 .000 54.920 -14.250
.000 .000 54.920 -14.250

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4600 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

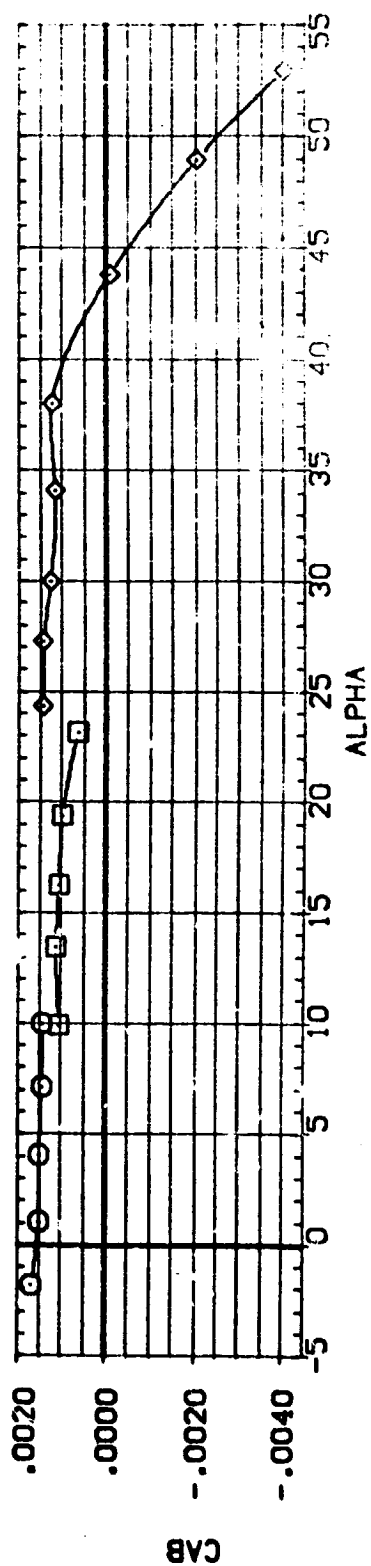
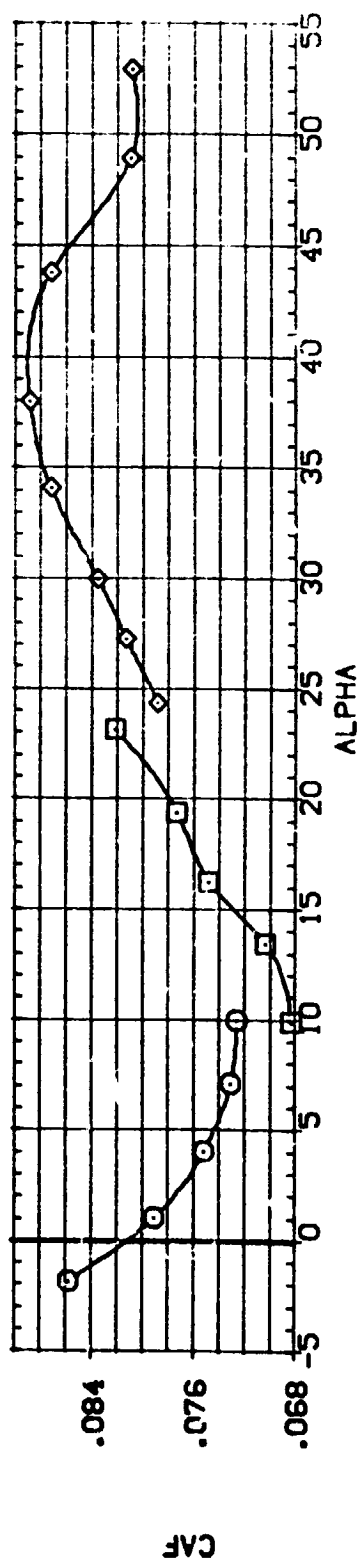
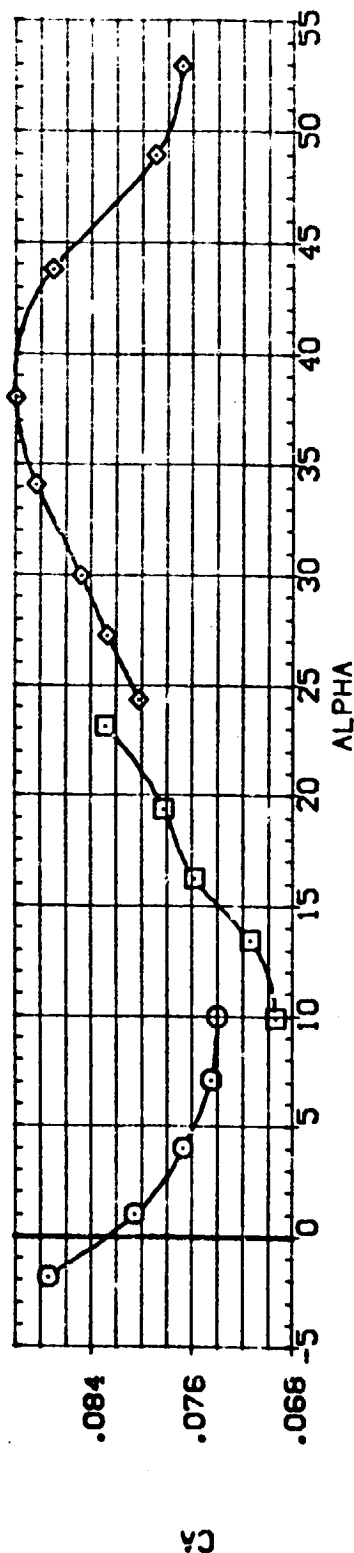


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL: (BBX007) (BBX008) (BBX052)

CONFIGURATION DESCRIPTION: AYES 3.5-150 GA11B (810F4C507M3-8) (V87E18) (V59S) AYES 3.5-150 GA11B (810F4C507M3-8) (V87E18) (V59S) AYES 3.5-150 GA11B (810F4C507M3-8) (V87E18) (V59S)

ELEVON RUDDER SPDBRK BOFLAP

REFERENCE INFORMATION: SREF 2690.0000 SC.FT. 12.0000 LREF 174.8100 IN. 12.0000 BREF 936.6800 IN. 12.0000 XMRP 1076.4800 IN. 12.0000 YMRP 400.0000 IN. 12.0000 ZMRP 400.0000 IN. 12.0000 SCALE .0150

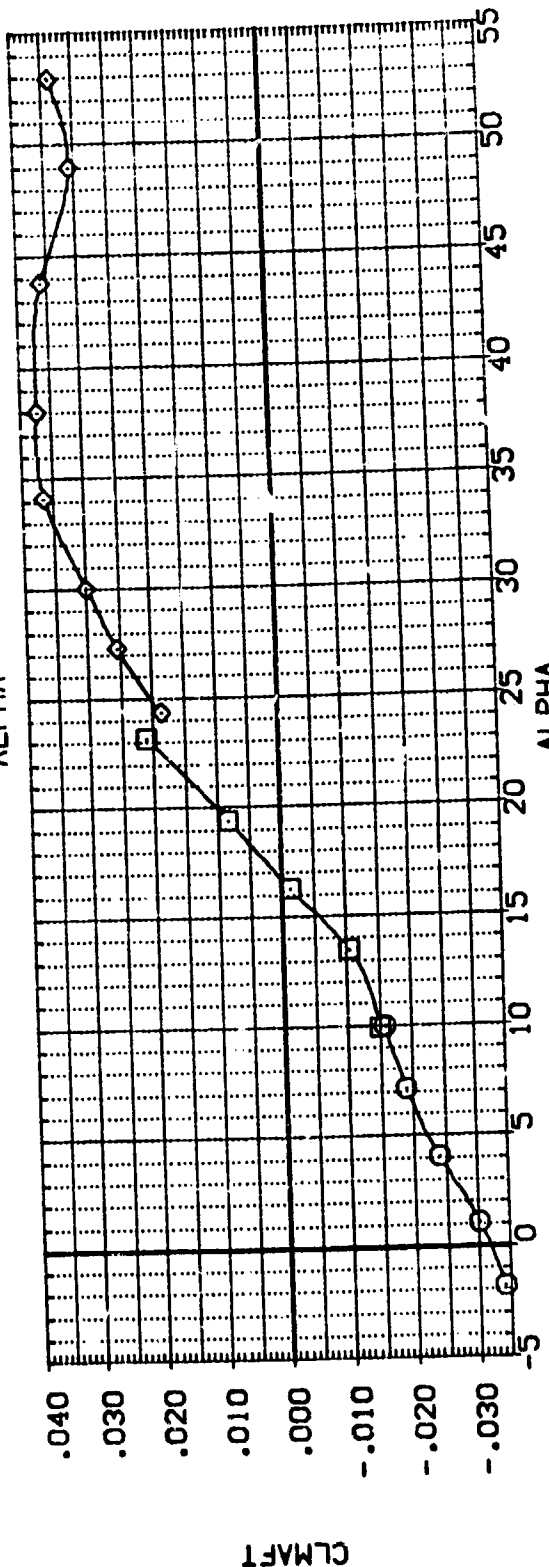
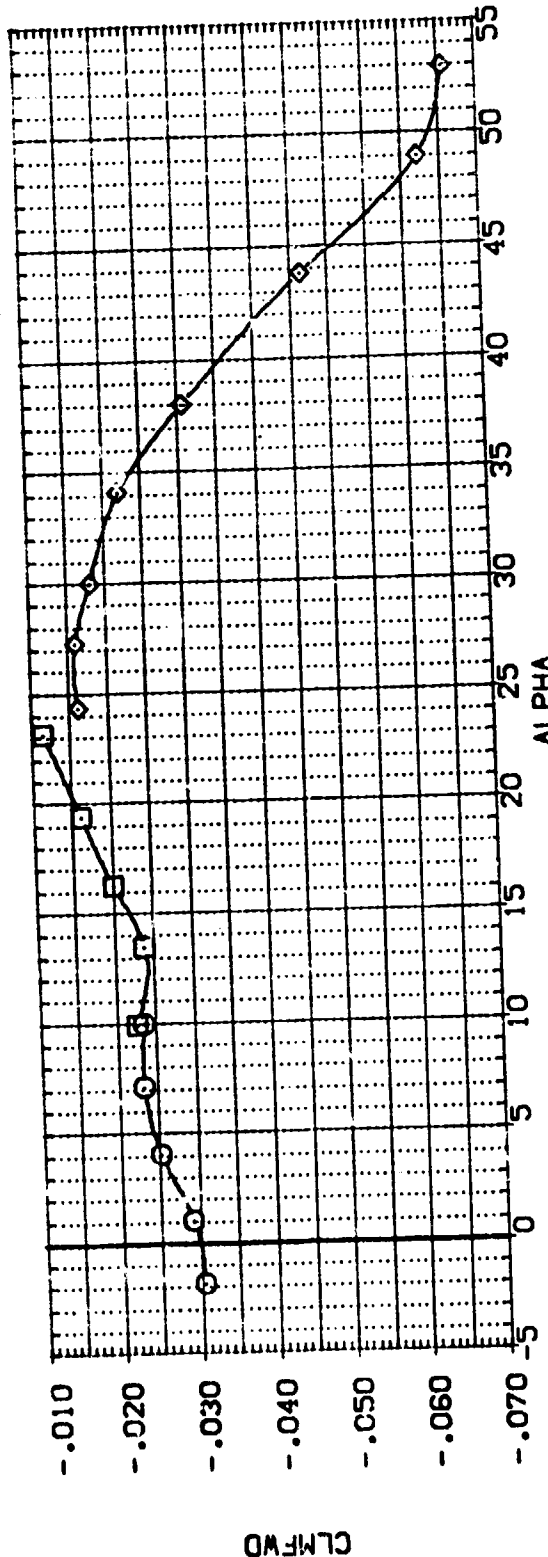


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BDFLAP	REFERENCE INFORMATION
(BB007)	AVES 3.5-160 3A11B (B10-4C507MG-B)(V67E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(BB008)	AVES 3.5-160 3A11B (B10-4C507MG-B)(V67E18)(V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BB052)	AVES 3.5-160 3A11B (B10-4C507MG-B)(V67E18)(V5R5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

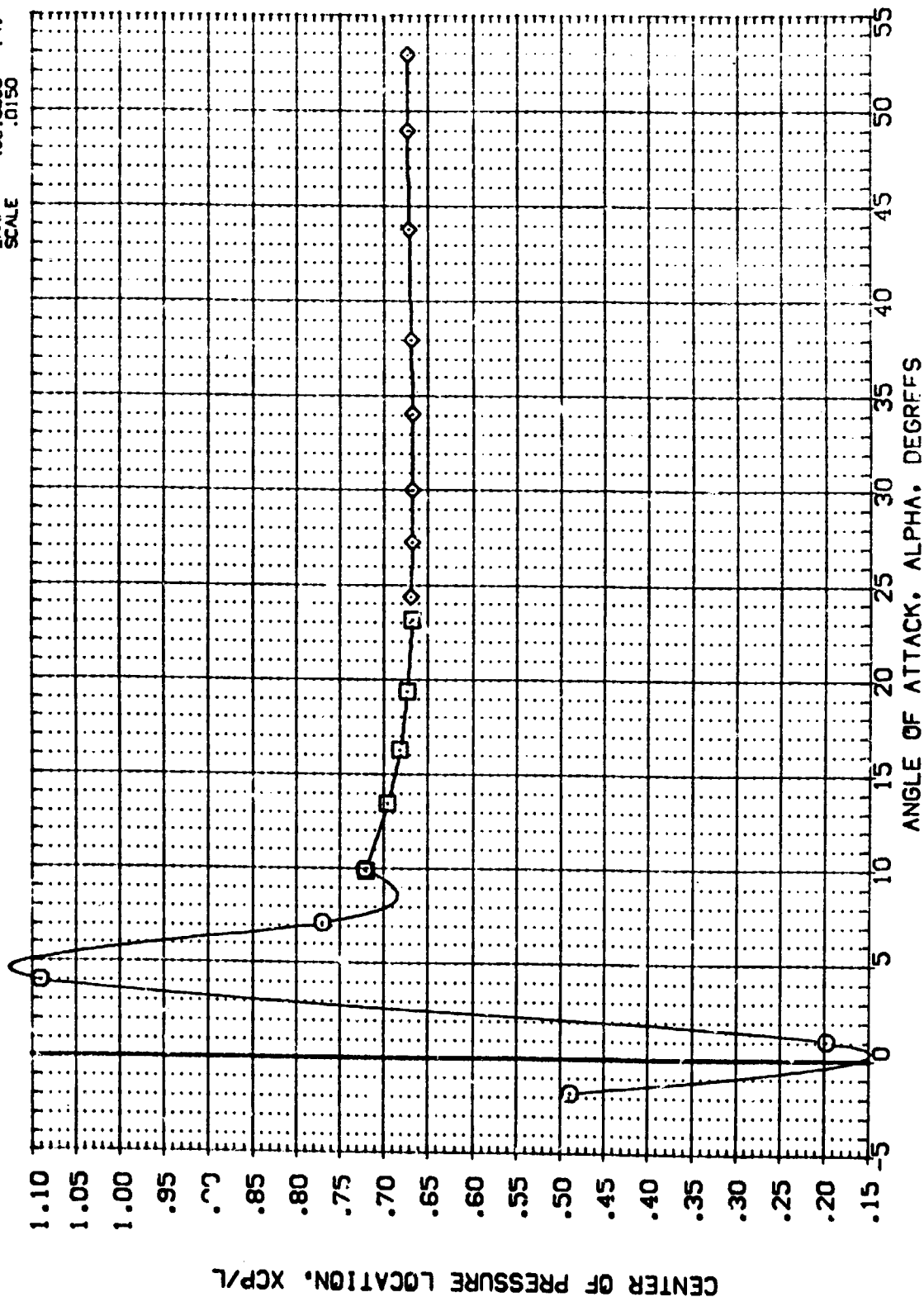


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BDFLAP	REFERENCE INFORMATION
(BBX007)	AVES 3.5-160 CA11B (B10F4C507H3-8)(V67E18)(V59S)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX008)	AVES 3.5-160 CA11B (B10F4C507H3-8)(V67E18)(V59S)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX052)	AVES 3.5-160 CA11B (B10F4C507H3-8)(V67E18)(V59S)	.000	.000	54.920	-14.250	BREF 936.8800 IN.
						XTRP 1076.4800 IN.
						YTRP .0000 IN.
						ZTRP 400.0000 IN.
						SCALE .0150

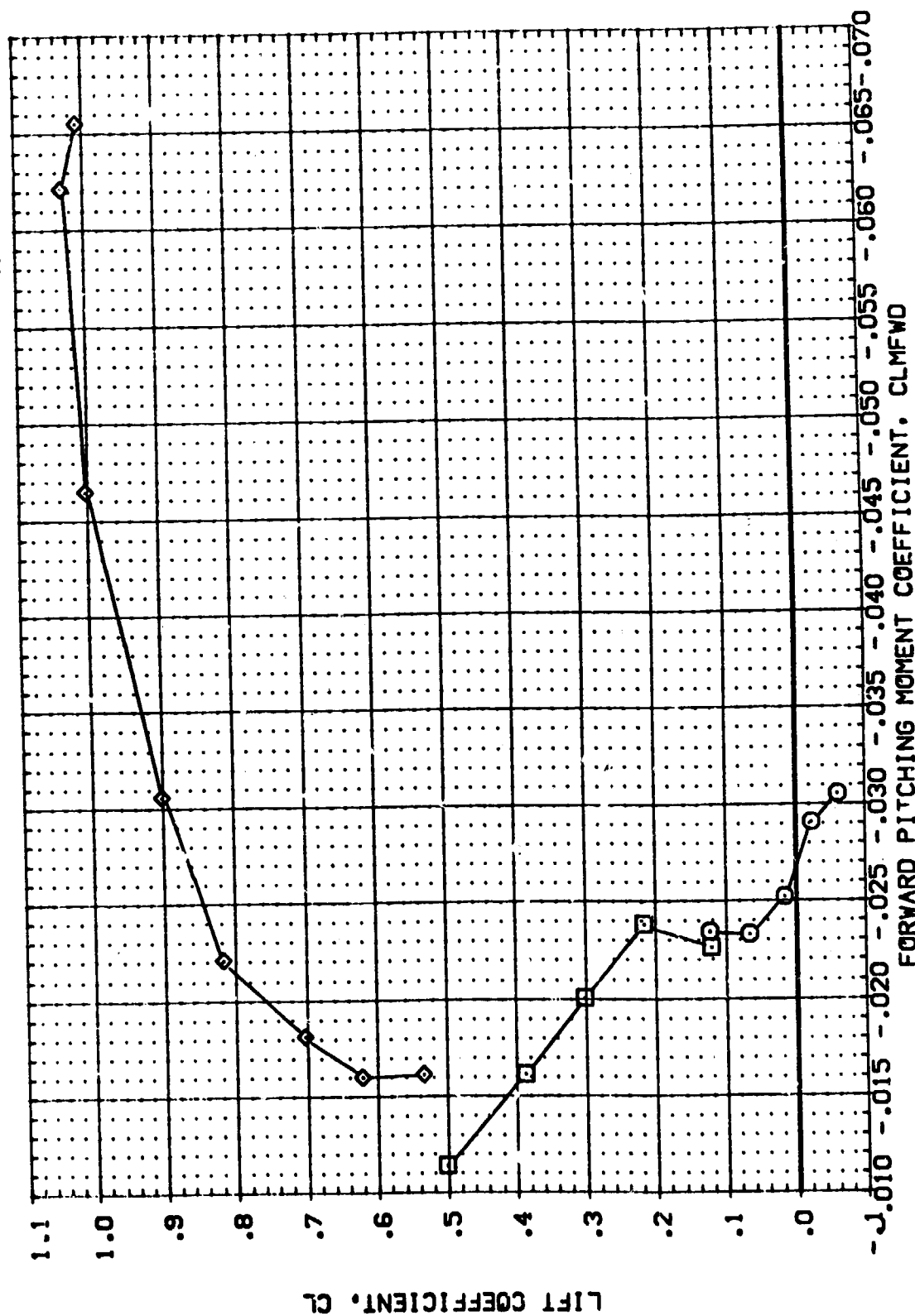
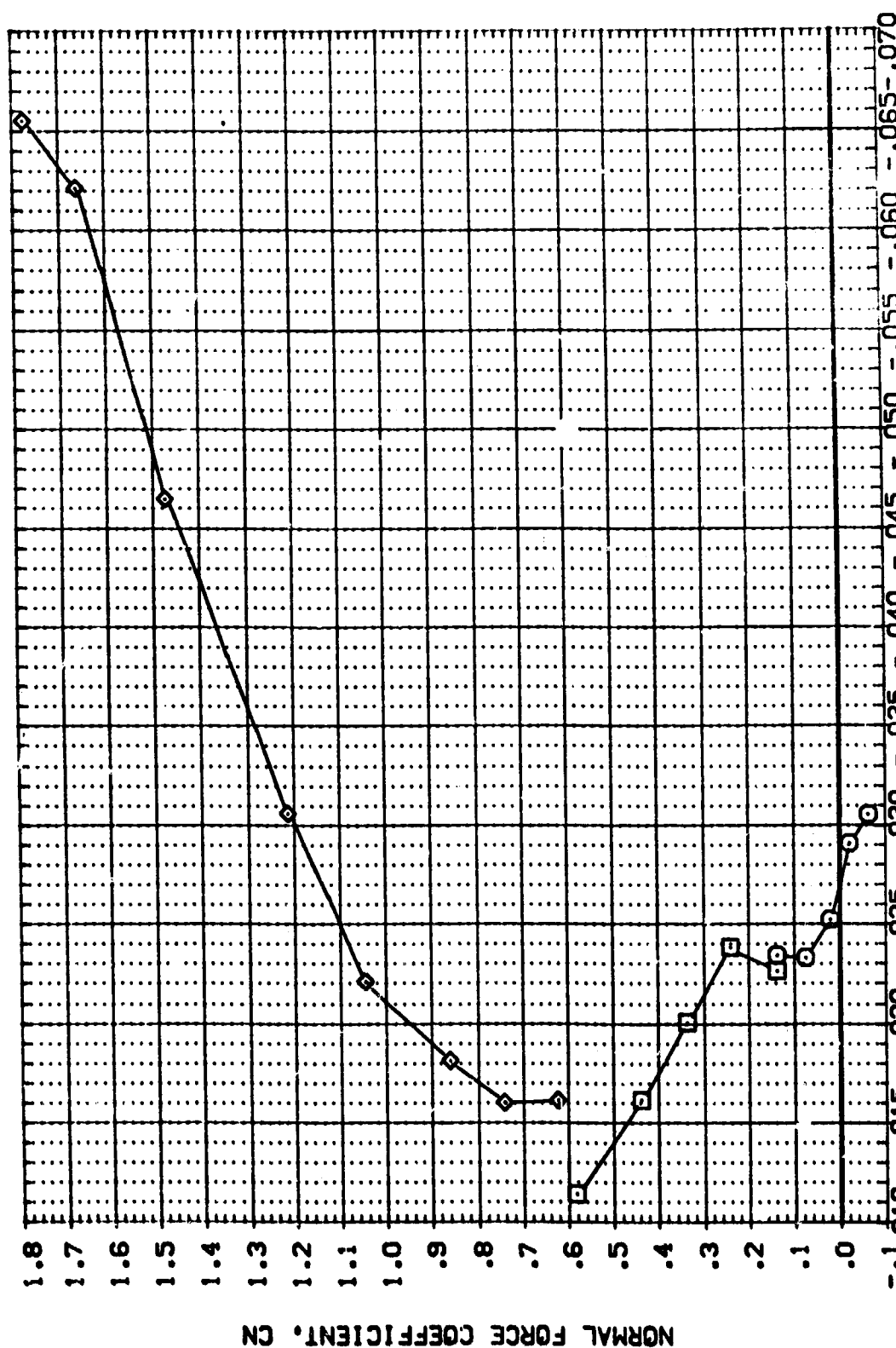


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBL.	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPD BRK	BD FLAP	REFERENCE INFORMATION
(880007)	AVES 3.5-160 DA11B (B1D'4C507G4B)(V87E18)(V58S)	.000	.000	54.920	-14.250	SNREF 2690.0000 90.FT.
(880008)	AVES 3.5-160 DA11B (B1D'4C507G4B)(V87E18)(V58S)	.000	.000	54.920	-14.250	LNREF 474.8100 IN.
(880032)	AVES 3.5-160 DA11B (B1D'4C507G4B)(V87E18)(V58S)	.000	.000	54.920	-14.250	BRREF 936.6800 IN.
						XRREF 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOT/IN	BOFLAP	REFERENCE INFORMATION
(88X007)	AMES 3.5-160 CA11B (810F4C507M3-8)(W87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(88X008)	AMES 3.5-160 CA11B (810F4C507M3-8)(W87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(88X052)	AMES 3.5-160 CA11B (810F4C507M3-8)(W87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YPRP 1076.4800 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

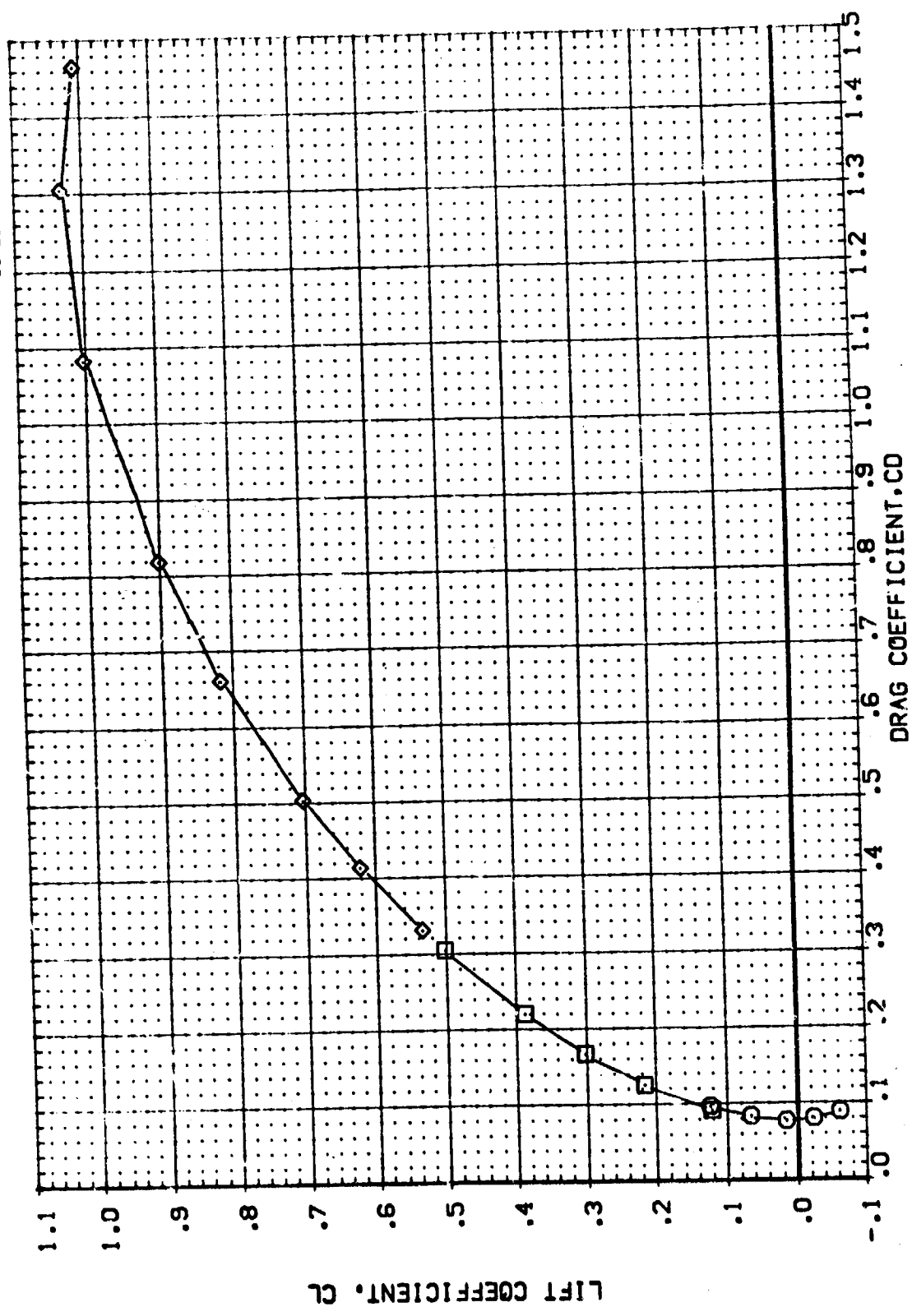
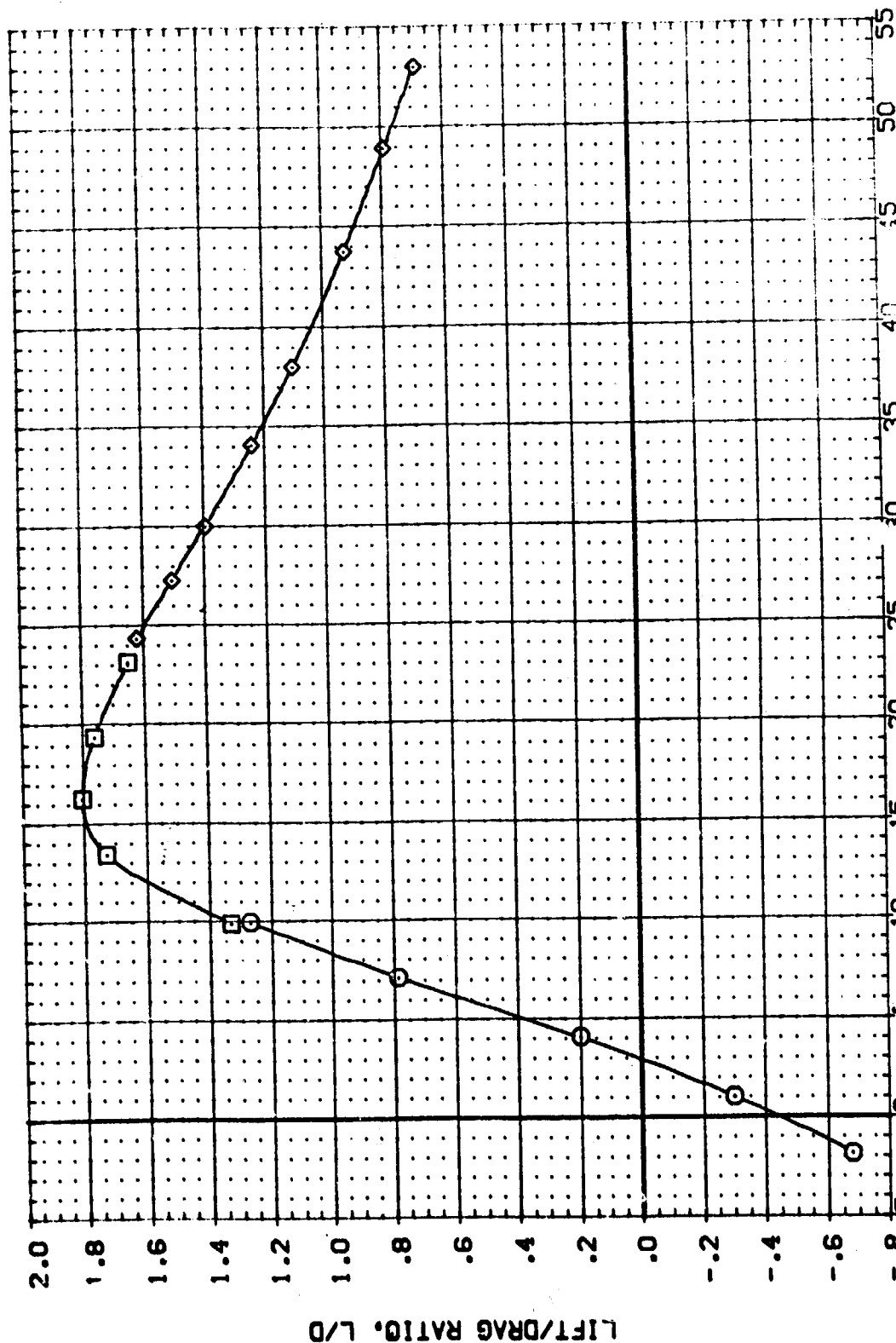


FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BCFLAP	REFERENCE INFORMATION
(ABX007)	AVES 3.5-160 DA118 (B1D4C507G4B) (V87E18) (V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000
(ABX008)	AVES 3.5-160 DA118 (B1D4C507G4B) (V87E18) (V5R5)	.000	.000	54.920	-14.250	LREF 474.8100
(ABX052)	AVES 3.5-160 DA118 (B1D4C507G4B) (V87E18) (V5R5)	.000	.000	54.920	-14.250	BREF 976.6800
						XMRP 1076.4800
						YMRP .0000
						ZMRP .0000
						SCALE 400.0000



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 2.A.2 MACH 7.32 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL: (BBK043) (BBK036)
CONFIGURATION DESCRIPTION: A-105-160 DALLB (B10F4C507-3-8)(V87E18)(VSR5)
A-105-160 DALLB (B10F4C507-3-8)(V87E18)(VSR5)
ELEVON: .000
RUDDER: .000
SPOBRK: 54.920
BOFLAP: -14.250
REFERENCE INFORMATION: SREF: 2690.0000 SO.FT. IN.
LREF: 474.8100 IN.
BREF: 936.8300 IN.
XMRP: 1076.4800 IN.
YMRP: .0000 IN.
ZMRP: 400.0000 IN.
SCALE: .0150

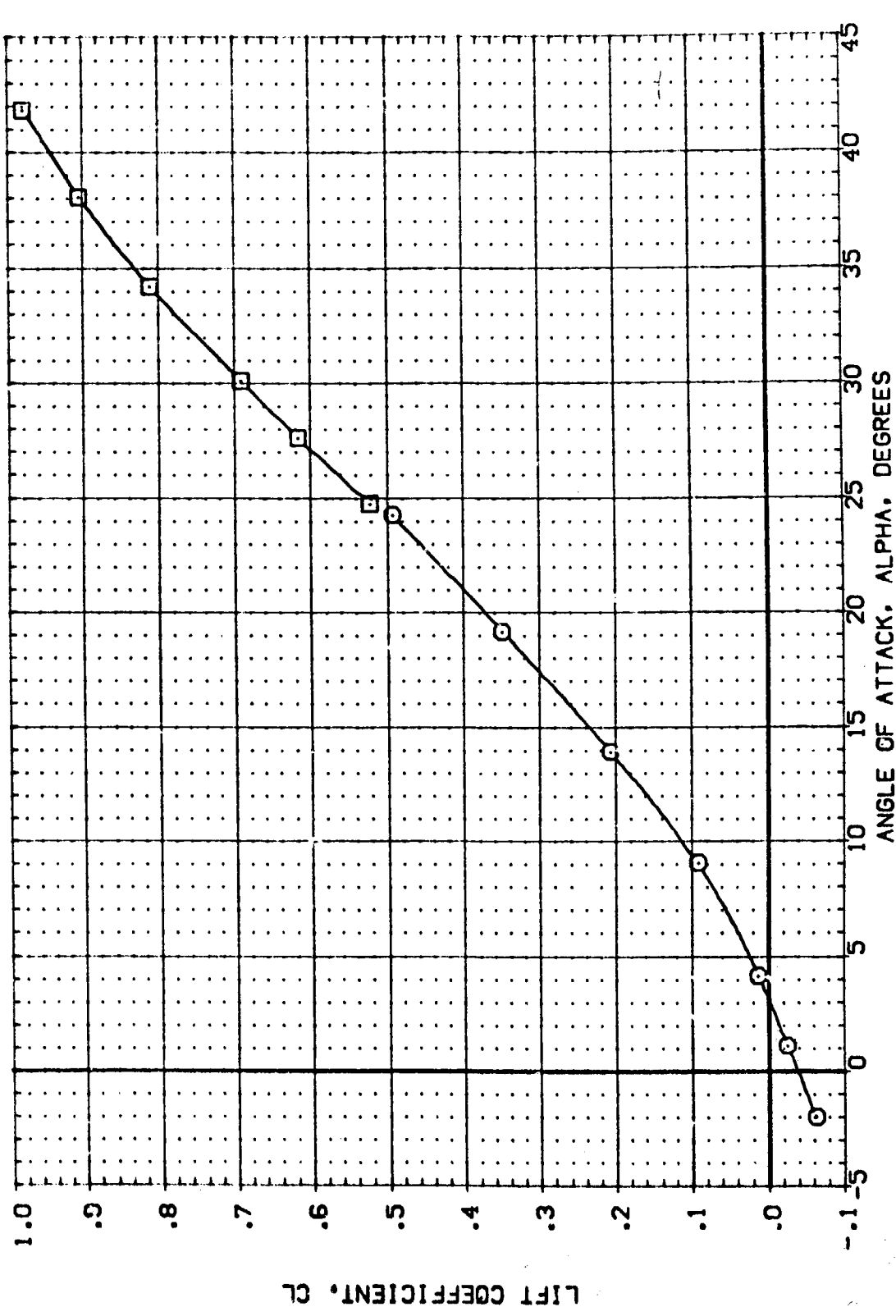



FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL: (BB043) (BB036)  CONFIGURATION DESCRIPTION: AYES 3.5-160 CALIB (B10F4C507G4B) (V87E18) (V595) AYES 3.5-160 CALIB (B10F4C507G4B) (V87E18) (V595)

ELEVON RUDDER SPOILER BOFLAP
 .000 .000 .000 .000
 .000 .000 .000 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

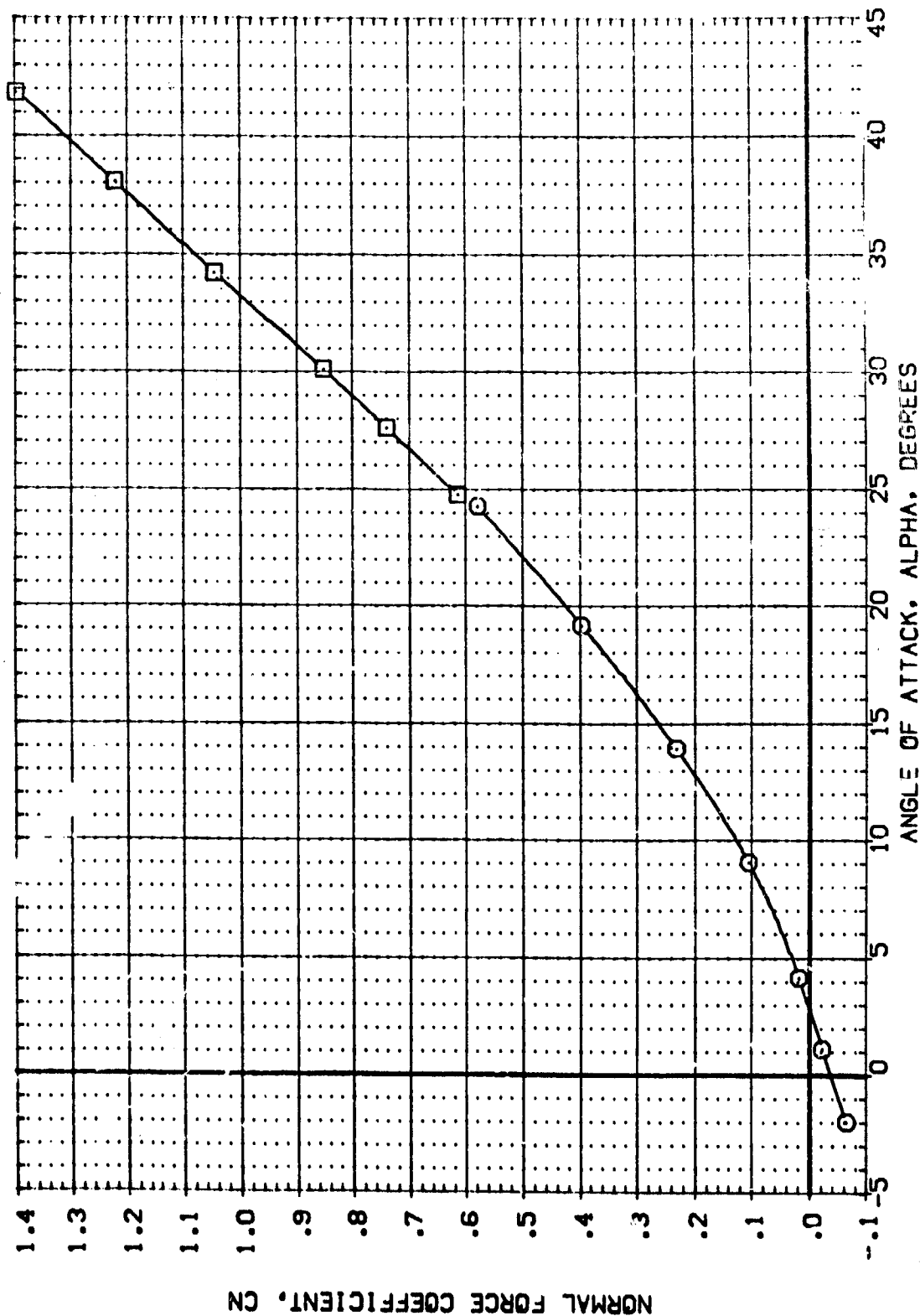
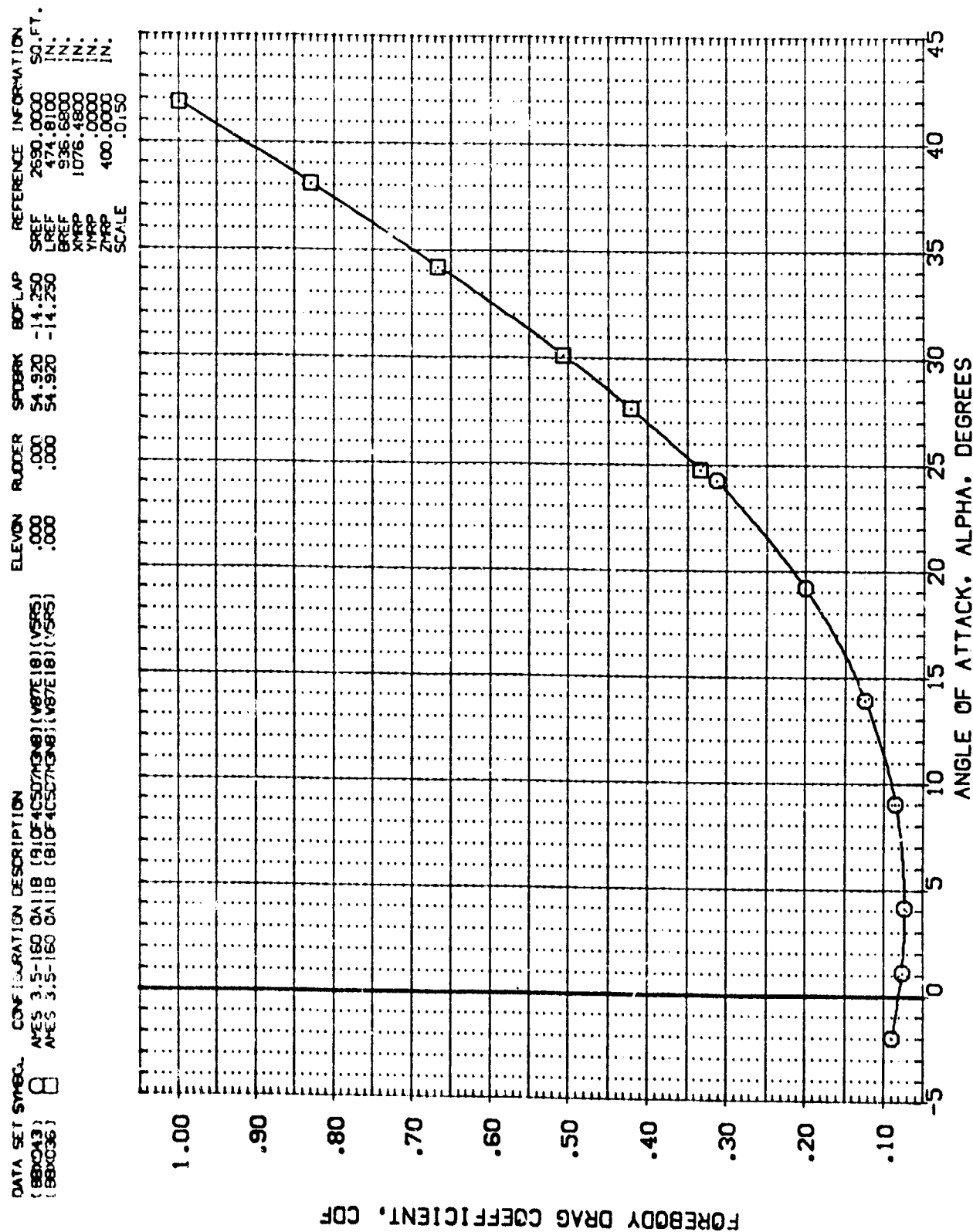


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 10.29


$$(A)_{\text{PiACH}} = 10.29$$

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPDRK		BOFLAP		REFERENCE INFORMATION	
(BB0043)	(BB0036)	AWES 3.5-160	DA11B (B10F4C507G4B)(V87E18)(V59S)	.000	.000	.000	.000	54.920	-14.250	SREF	2690.0000	SC.FT.	
		AWES 3.5-160	DA11B (B10F4C507G4B)(V87E18)(V59S)	.000	.000	.000	.000	54.920	-14.250	LREF	474.8100	IN.	
										BREF	936.6800	IN.	
										XMRP	1076.4800	IN.	
										YMRP	.0000	IN.	
										ZMRP	400.0000	IN.	
										SCALE	.0150		

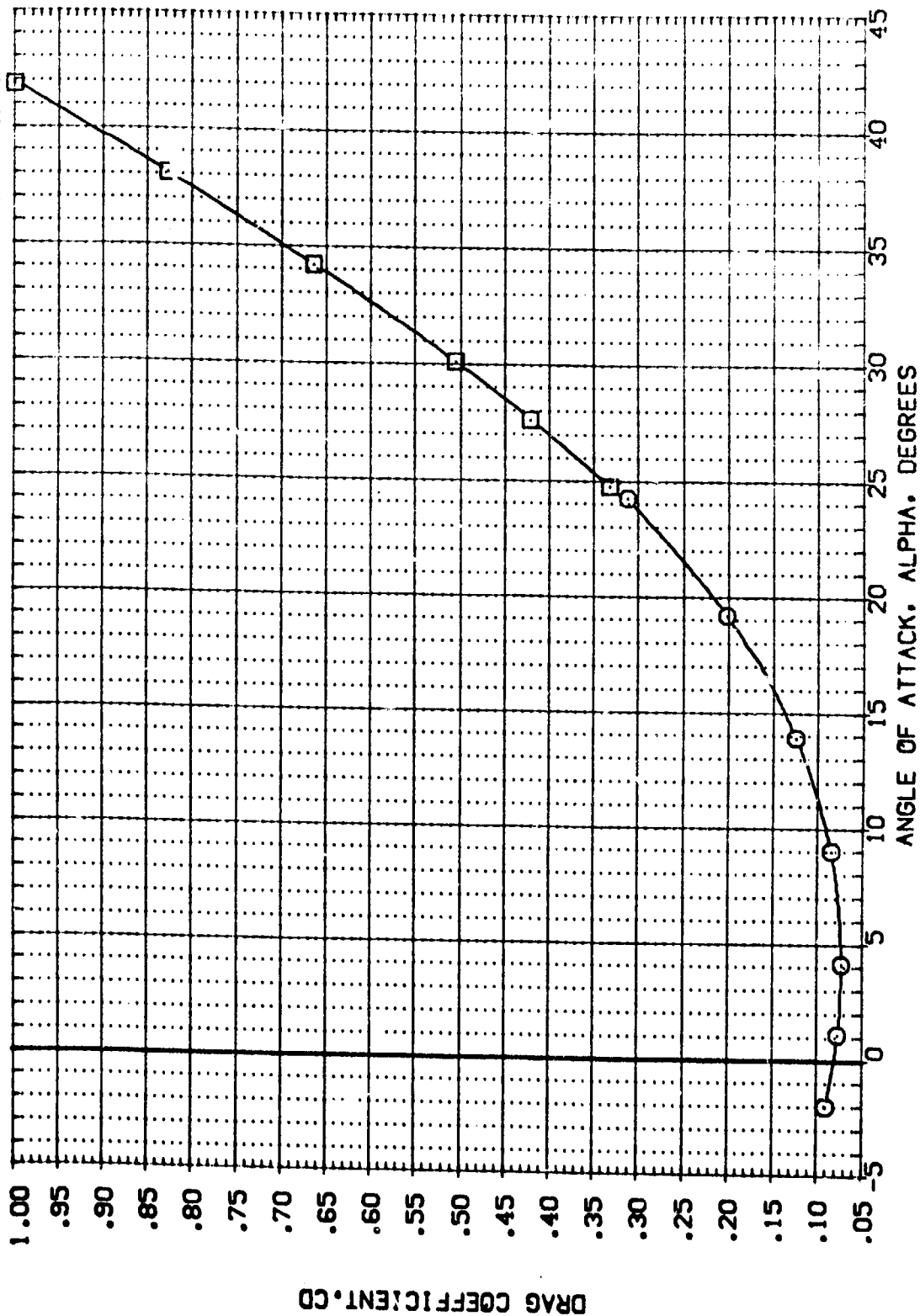


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL: (88X043) (88X036)

CONFIGURATION DESCRIPTION:
 ARES 3 5-150 DA118 (B10F4C507G-8) (V87E18) (V59S)
 ARES 3 5-150 DA118 (B10F4C507G-8) (V87E18) (V59S)

ELEVON RUDDER SPOILER BOFLAP
 .000 .000 .000 .000
 .000 .000 .000 .000
 .000 .000 .000 .000
 .000 .000 .000 .000

REFERENCE INFORMATION:
 SREF 2690.0000 50.000
 LREF 474.8100 1.000
 BREF 936.6800 1.000
 XMRP 1076.4800 1.000
 YMRP 400.0000 1.000
 ZMRP 400.0000 1.000
 SCALE .0150

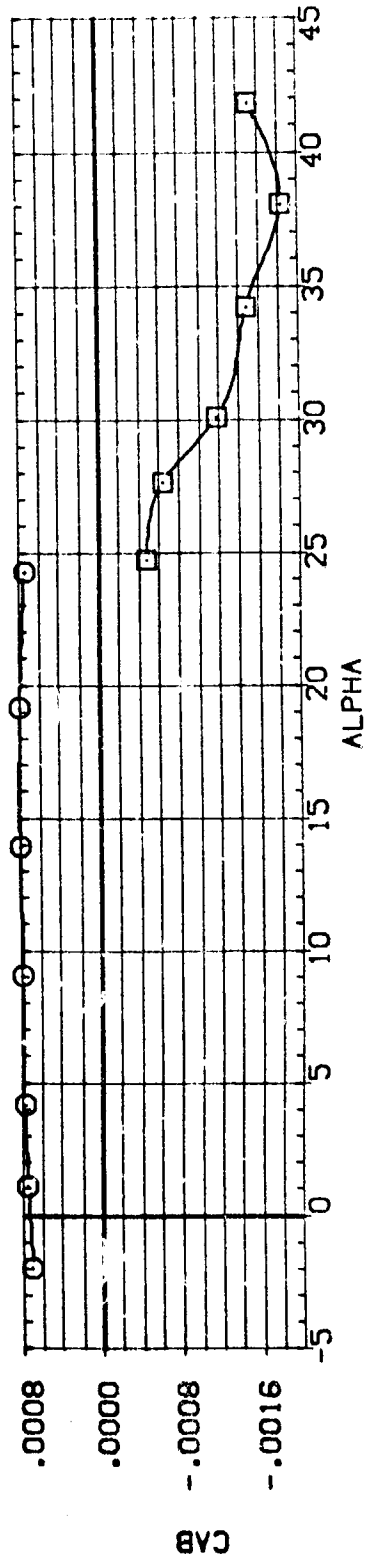
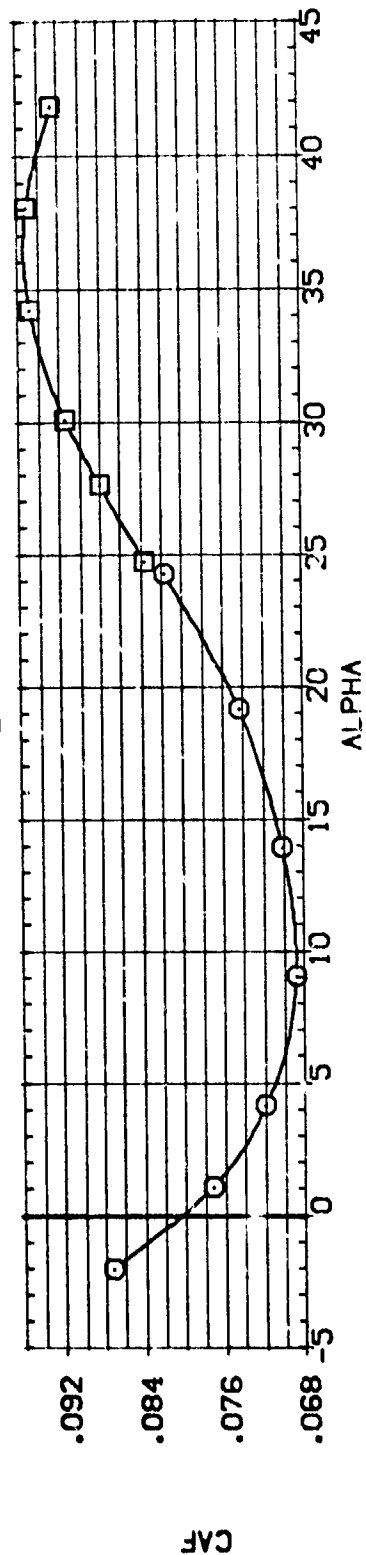
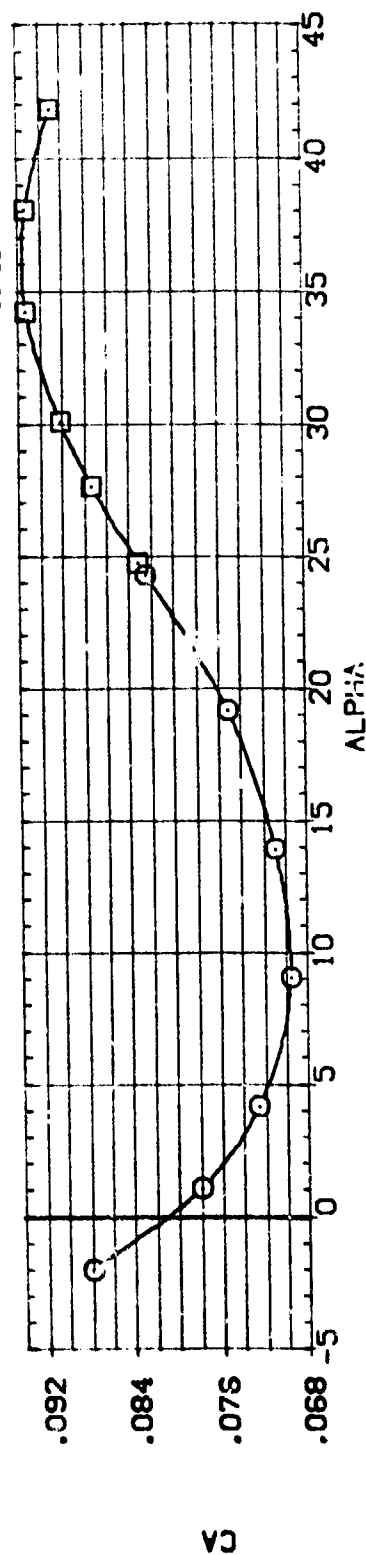


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

22

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPORK	BOFLAP	REFERENCE INFORMATION
(BB043)	AKES 3.5-160 CA11B (B10F4C5D7M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BB036)	AKES 3.5-160 CA11B (B10F4C5D7M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

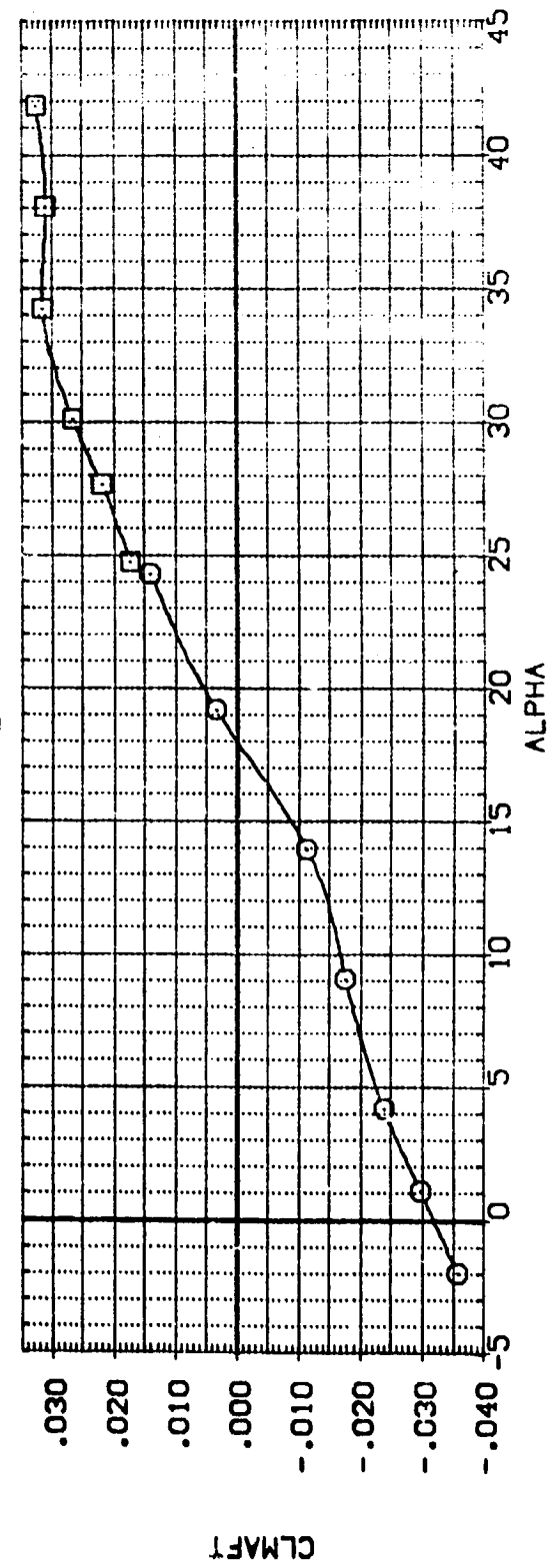
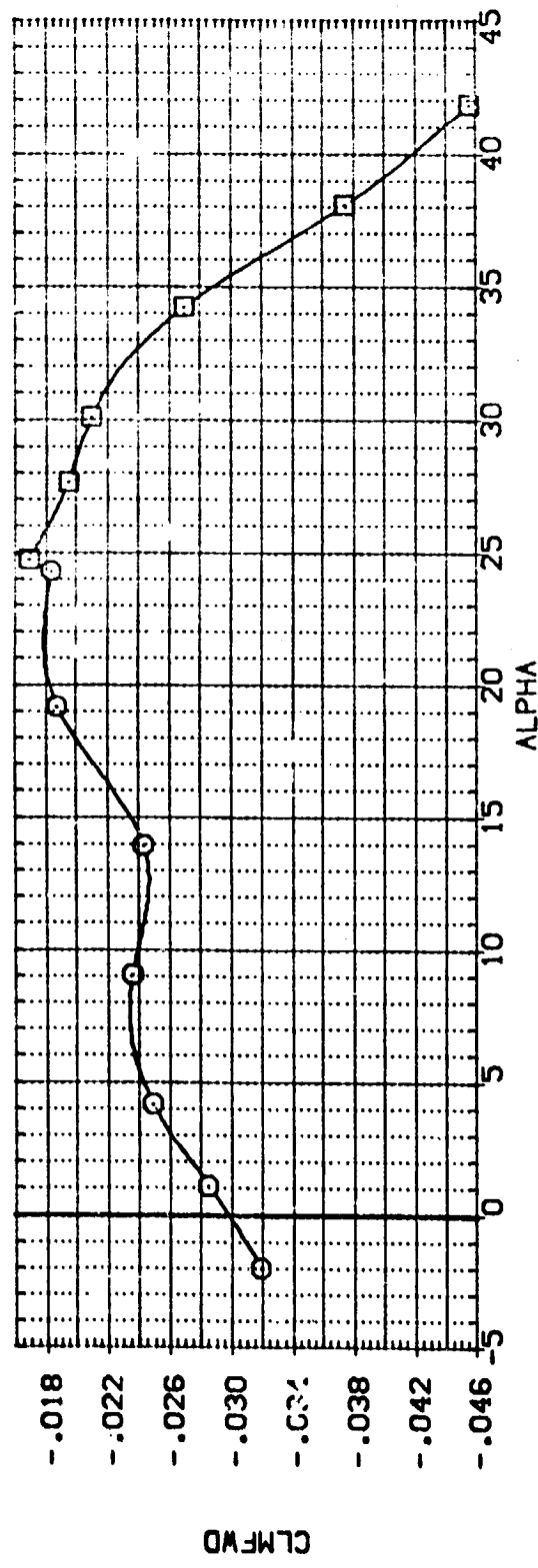


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(88K043)	AVES 3.5-160 DA11B (B10F4C507G3B) (V87E18) (V5K5)	.000	.000	54.920	-14.250	SREF 2690.0000 SO.FT.
(88K036)	AVES 3.5-160 DA11B (B10F4C507G3B) (V87E18) (V5K5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

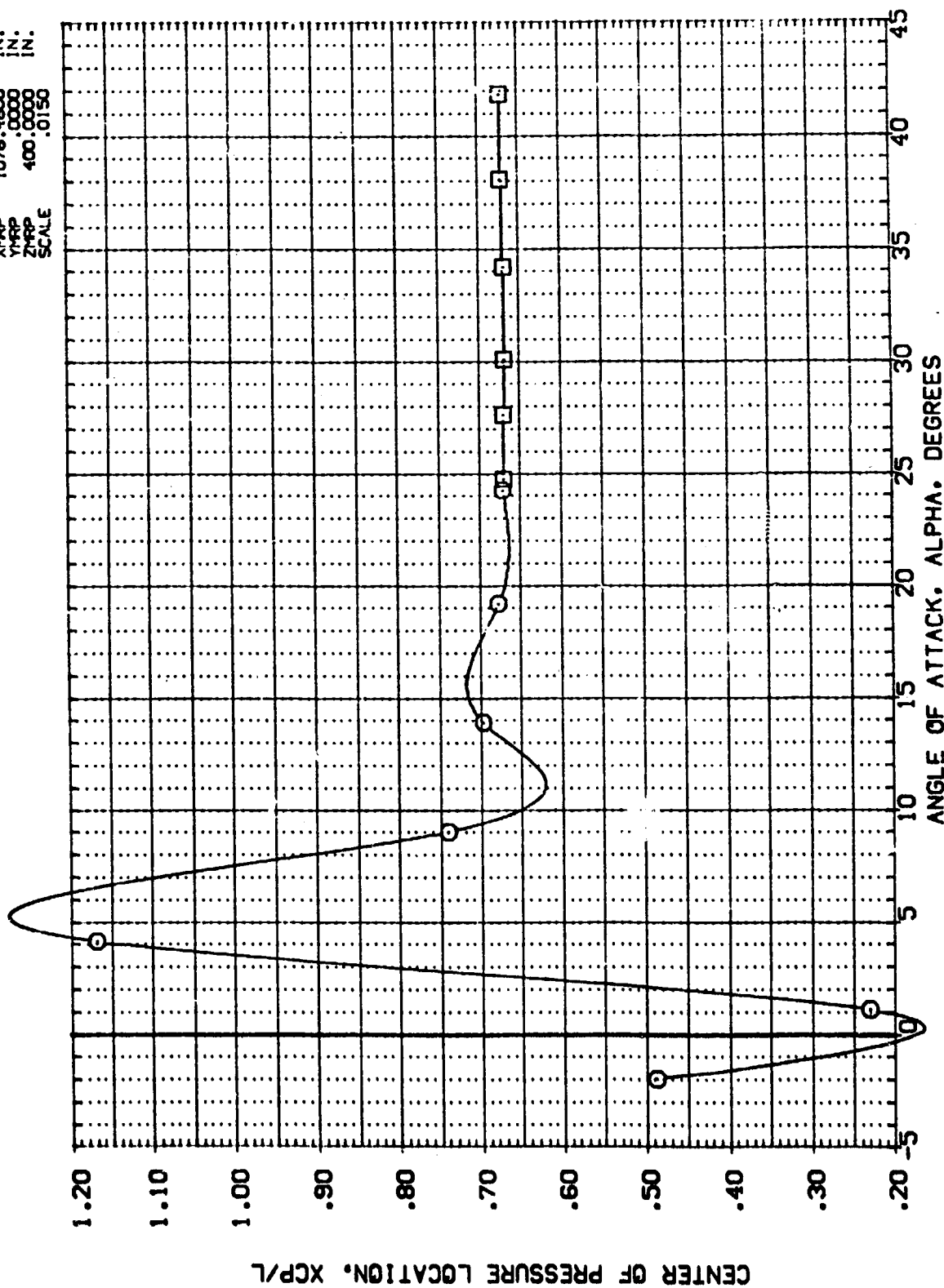


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION	
(BBX043)	□	AVES 3.5-160 0A11B (B1D'4C5D7G4B)(V87E1B)(V5VS)	.000	.000	S4.920	-14.250	SREF	2690.0000 SQ.FT.
(BBX036)	□	AVES 3.5-160 0A11B (B1D'4C5D7G4B)(V87E1B)(V5VS)	.000	.000	S4.920	-14.250	LREF	474.00 IN.
							BREF	936.3900 IN.
							XPRP	1076.4800 IN.
							YPRP	400.0000 IN.
							ZPRP	400.0000 IN.
							SCALE	.0150

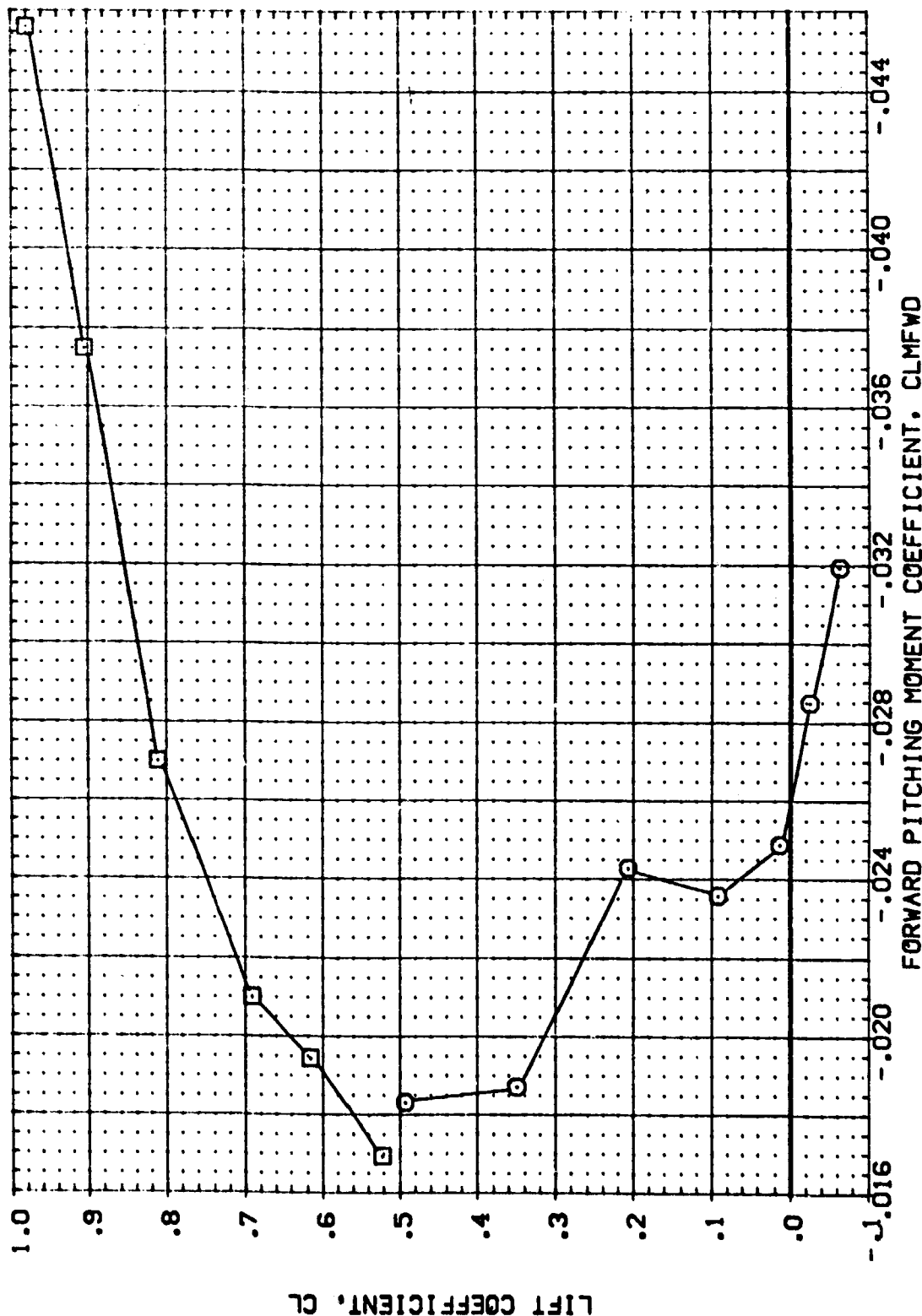
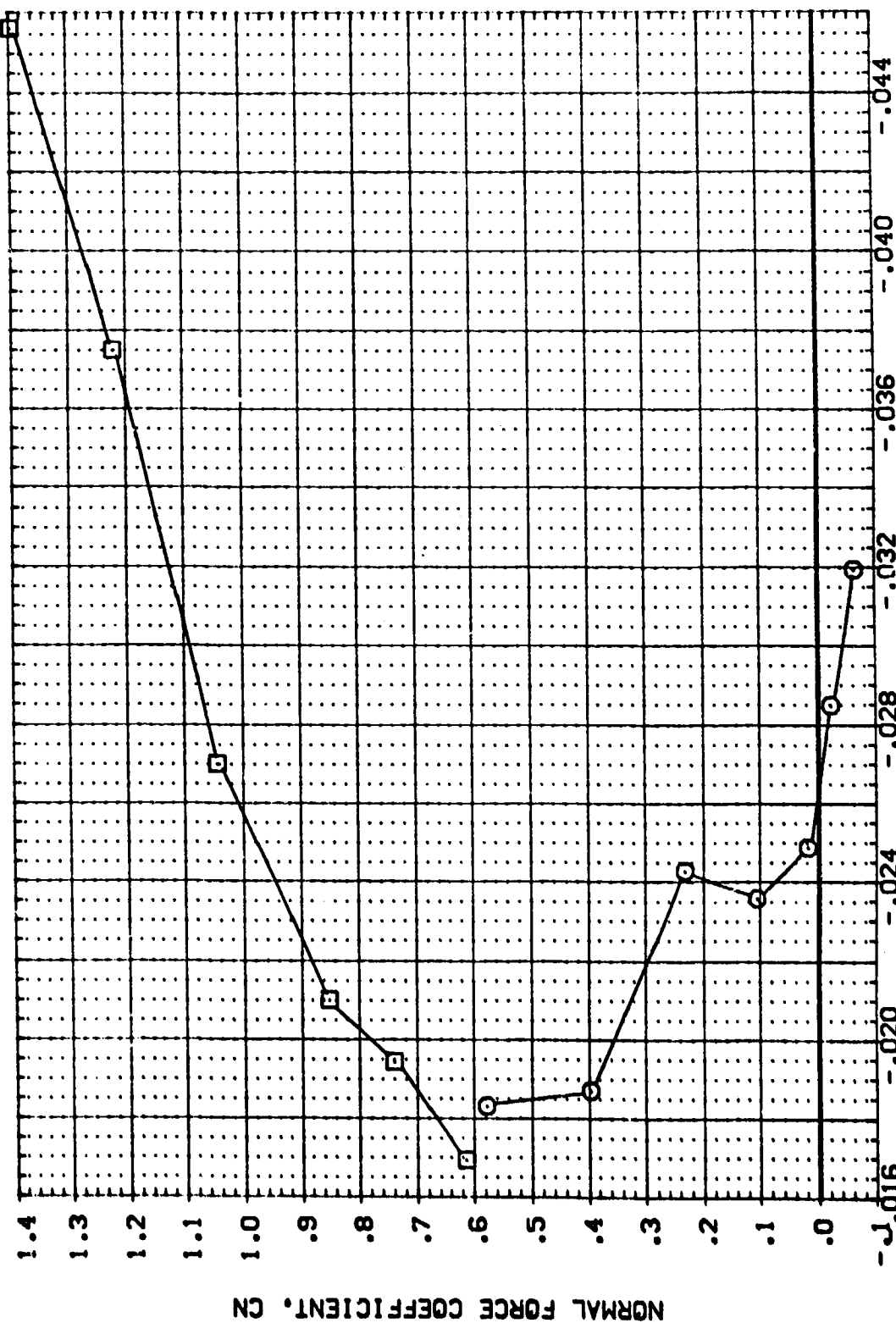


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDGRK	BOFLAP	REFERENCE INFORMATION
(BBX043)	AMES 3.5-160 GA11B (B10F4C507G9B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX036)	AMES 3.5-160 GA11B (B10F4C507G9B)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XREF 1076.4800 IN.
						YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150



FORWARD PITCHING MOMENT COEFFICIENT. CLMFW

FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBOX043)	AVES 3.5-160 CA118 (B10F4C507M3V8)(V87E18)(VSR5)	.000	.000	54.920	-14.250	SREF 2690.0000 SC.FT.
(BBOX035)	AVES 3.5-160 CA118 (B10F4C507M3V8)(V87E18)(VSR5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE 400.0000

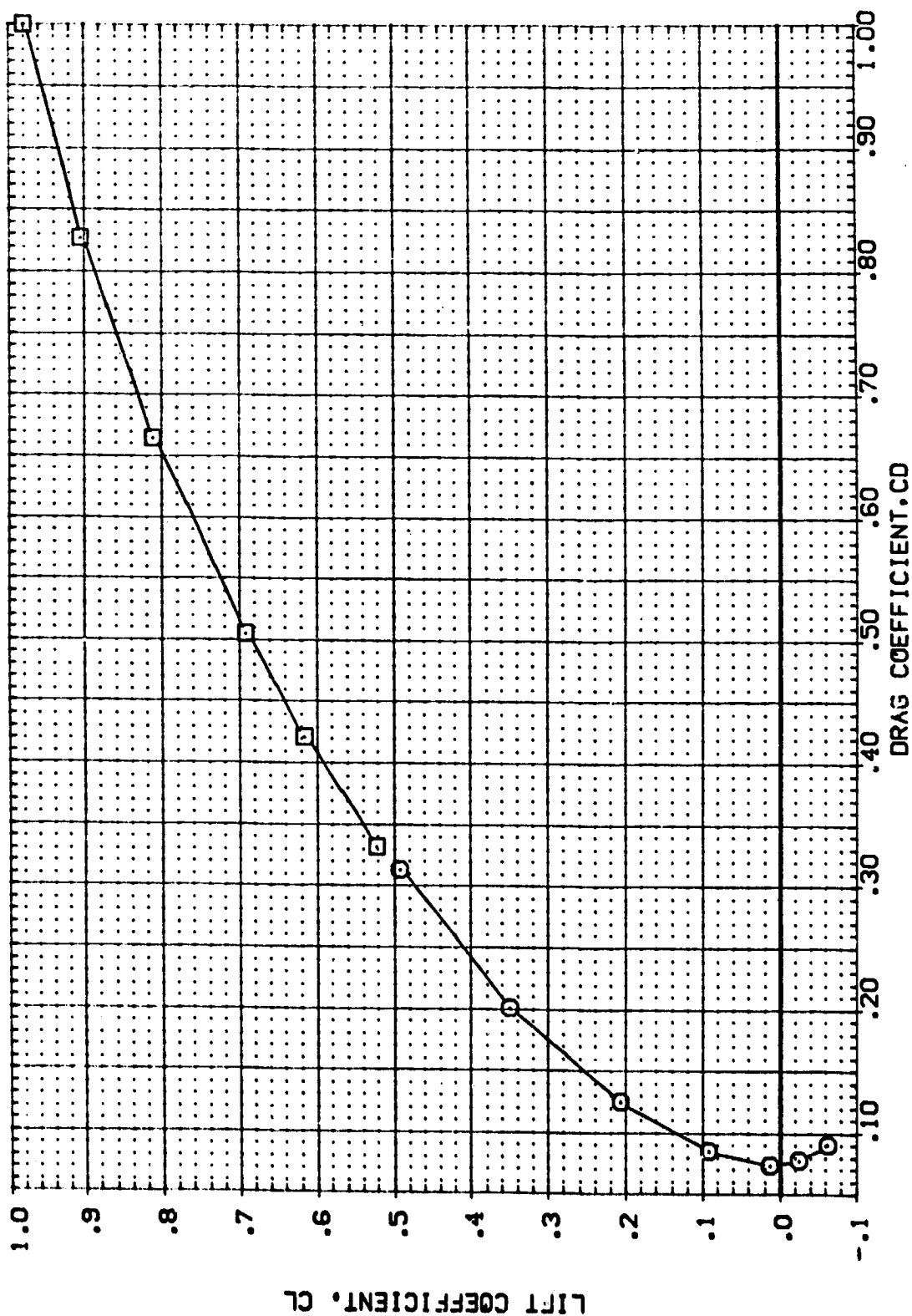


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(ABX043)	AVES 3.5-180 CA118 (BID-4C507G-8)(V67E18)(V595)	.000	.000	54.920	-14.250	SREF 2690.0000
(ABX035)	AVES 3.5-180 CA118 (BID-4C507G-8)(V67E18)(V595)	.000	.000	54.920	-14.250	LREF 474.8100
						BREF 936.6900
						XPRP 1076.4800
						YPRP 400.0000
						ZPRP 400.0000
						SCALE .0150

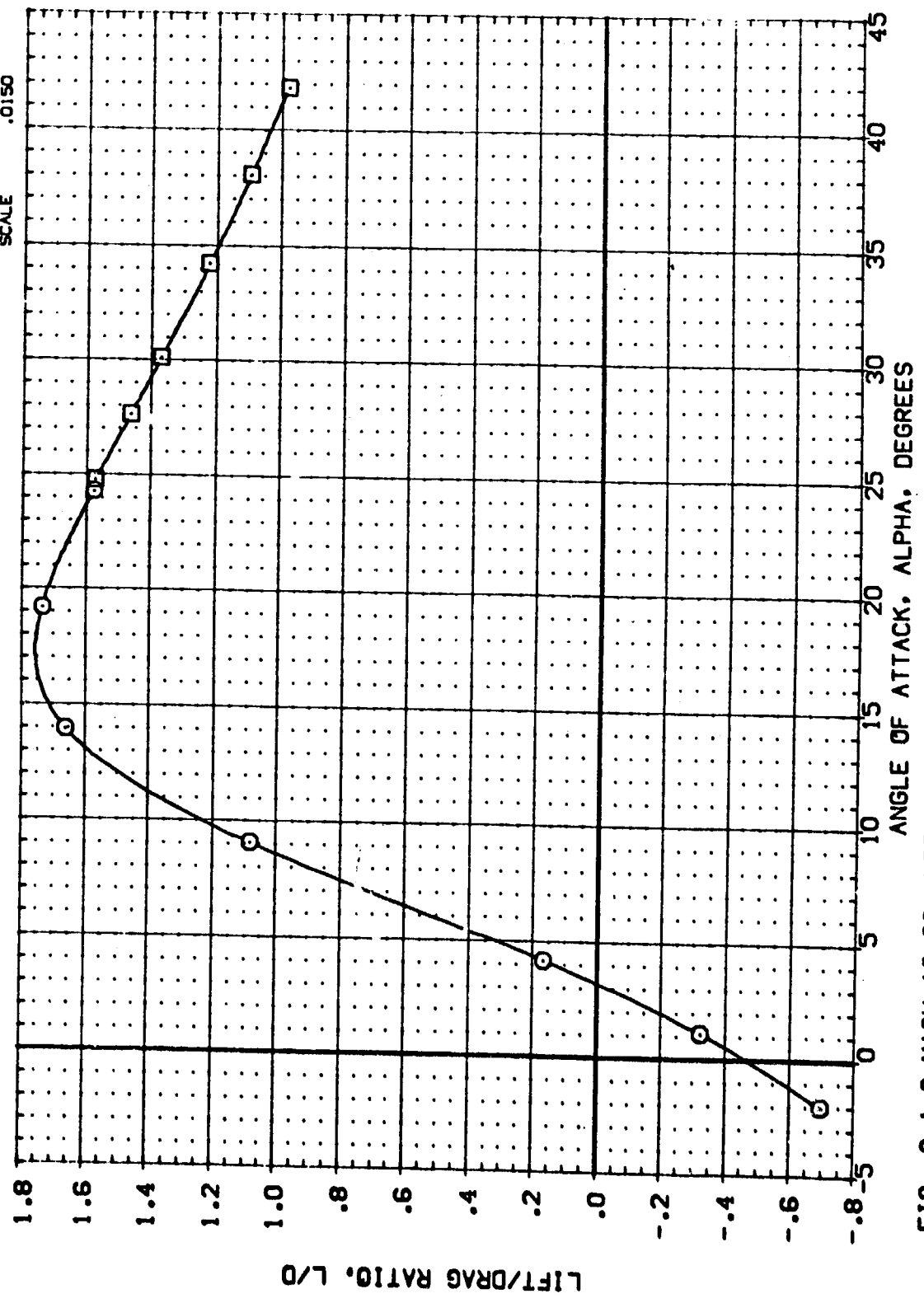


FIG. 2.A.3 MACH 10.29 UNDEFLECTED ELEVON EFFECTS
(A)MACH 10.29

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BBX066)
(BBX048)

APES 3.5-160 CAL1B (B1DF4C5D7H3N8)
APES 3.5-160 CAL1B (B1DF4C5D7H3N8)

ELEVON
-40.000
-40.000

RUDDER
.000
.000

SPODBK
54.920
54.920

BOFLAP
-14.250
-14.250

REFERENCE INFORMATION:
SREF 2600.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4900 IN.
YMRP 400.0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

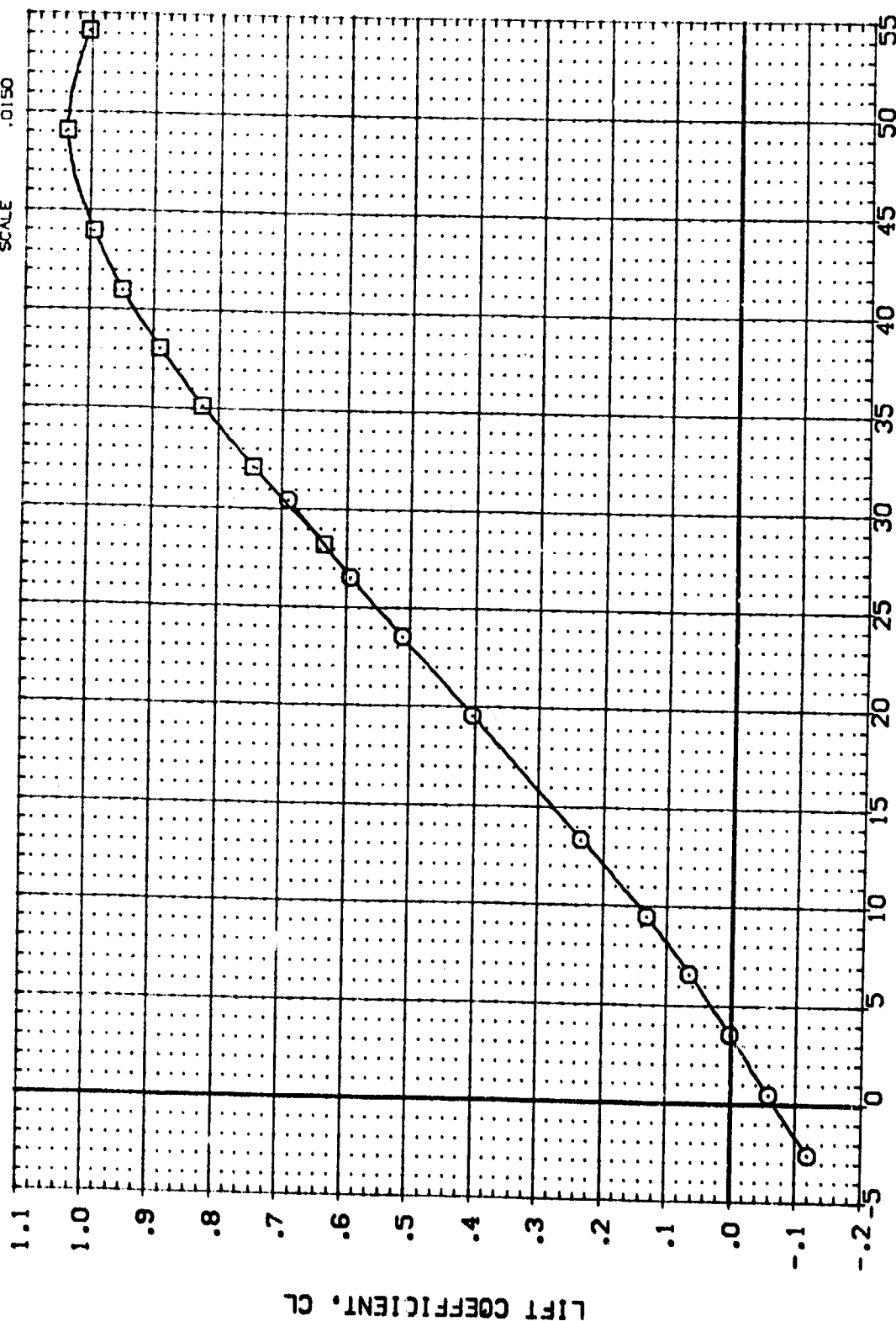


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (88065) A-ES 3.5-160 CA11B (B10F4C507G3B)(V87E18)(V5K5)
 (88048) A-ES 3.5-160 CA11B (B10F4C507G3B)(V87E18)(V5K5)

ELEVON RUDDER SPOBRK BOFLAP
 -40.000 .000 54.920 -14.250
 -40.000 .000 54.920 -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 VREF 1076.4800 IN.
 WREF .0000 IN.
 ZREF .0000 IN.
 SCALE 400.0000 IN.
 .0150

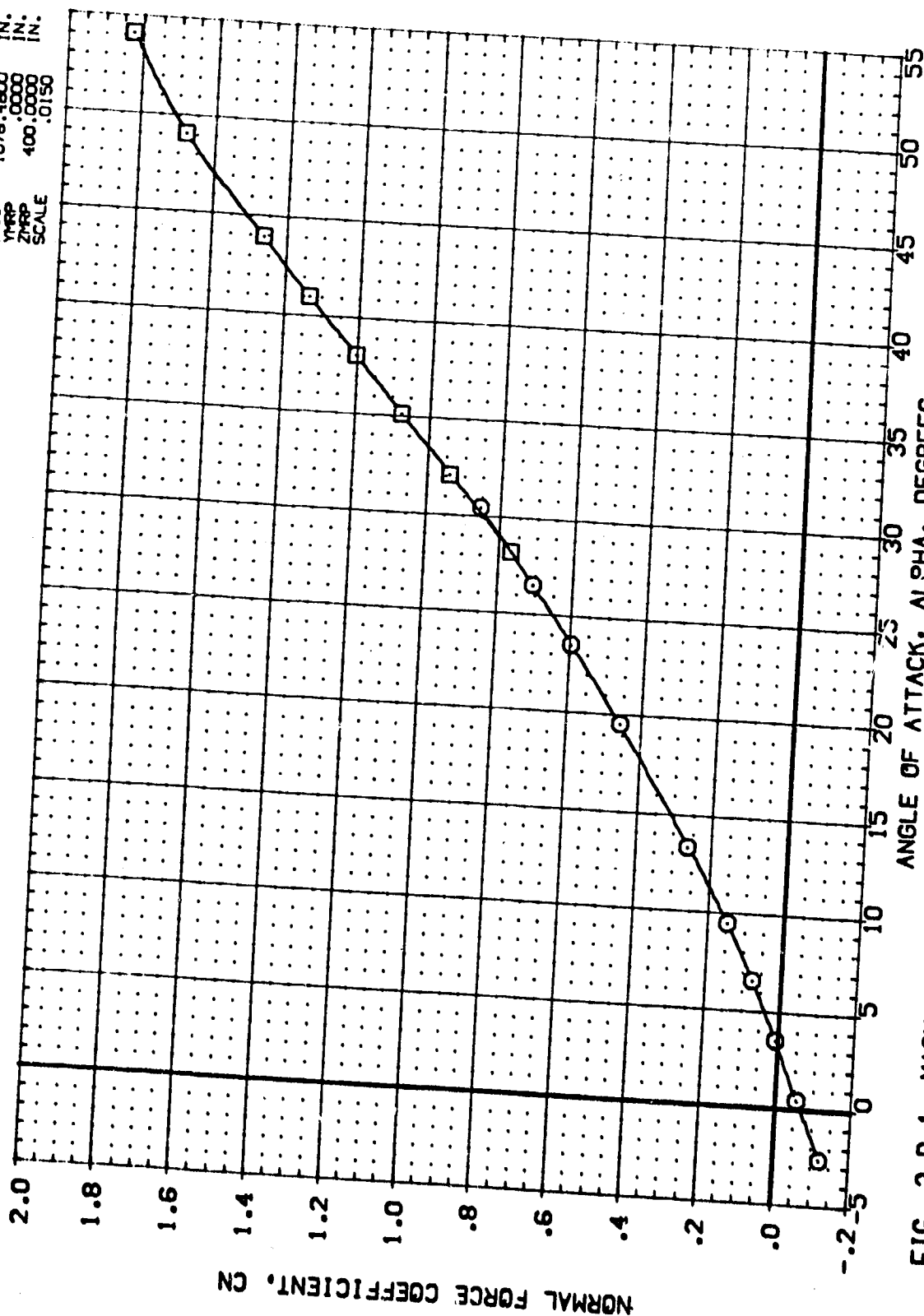
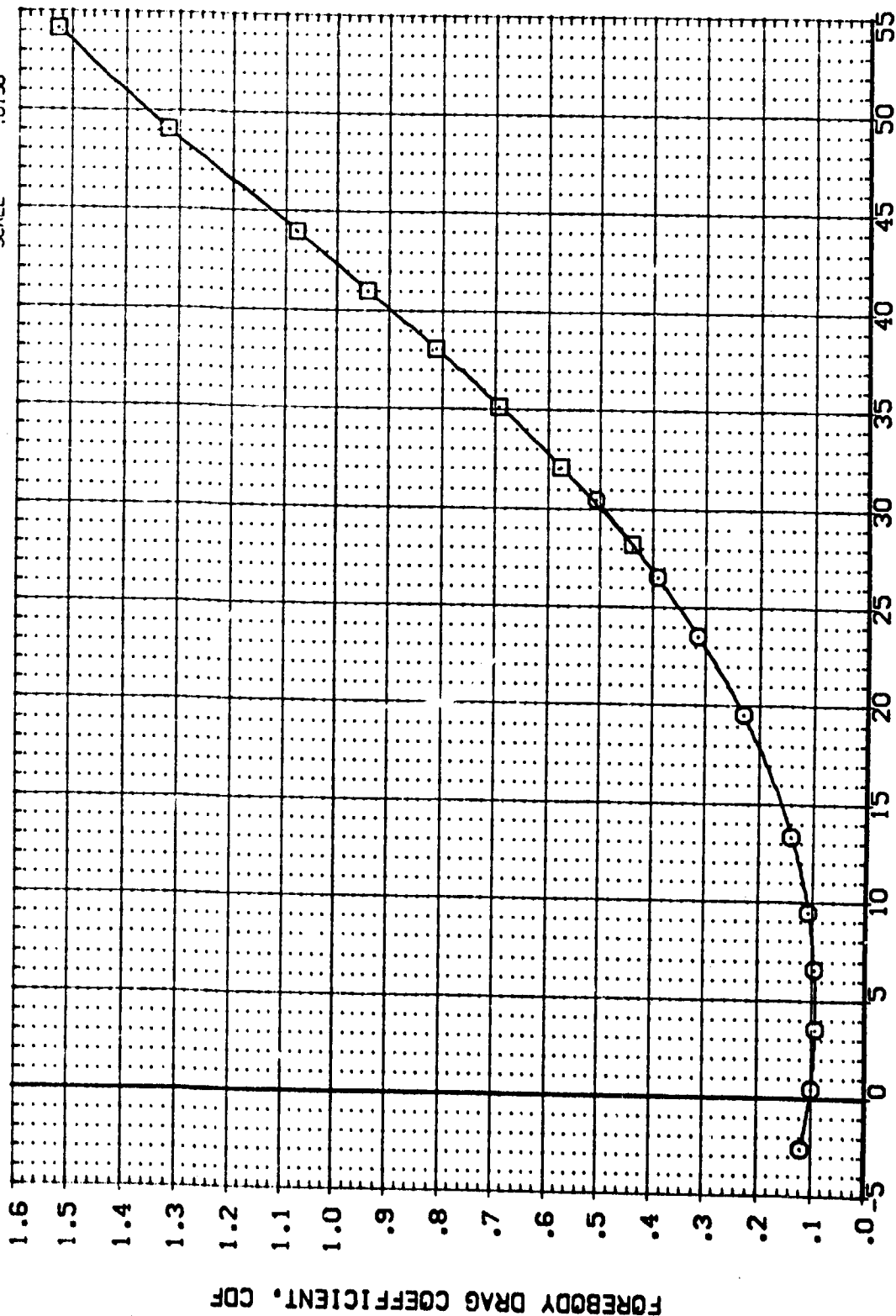


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS
 (A)MACH = 5.26

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPDBRK		BOFLAP		REFERENCE INFORMATION	
(BBX055)	(BBX048)	AVES 3.5-160	DA11B (B10F4C507H3N8)	(V87E18)	(V87E18)	.000	.000	54.920	-14.250	SREF	2650.0000	50.1 FT.	
		AVES 3.5-160	DA11B (B10F4C507H3N8)	(V87E18)	(V87E18)	.000	.000	54.920	-14.250	LREF	474.8100	IN.	
										BREF	936.6800	IN.	
										XMRP	1076.4800	IN.	
										YMRP	0.0000	IN.	
										ZMRP	400.0000	IN.	
										SCALE	.0150		



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOBRK	BOFLAP	SREF	2690.000L	50.FT.
(88X056)	AVES 3.5-160 OA11B (810F4C507H3V8)(V87E18)(V87E18)	-40.000	.000	54.920	-14.250	LREF	474.8100	N.
(88X018)	AVES 3.5-160 OA11B (810F4C507H3V8)(V87E18)(V87E18)	-40.000	.000	54.920	-14.250	BREF	933.6800	N.
						XMRP	1076.4800	IN.
						YMRP	400.0000	IN.
						ZMRP	400.0000	IN.
						SCALE	.0150	

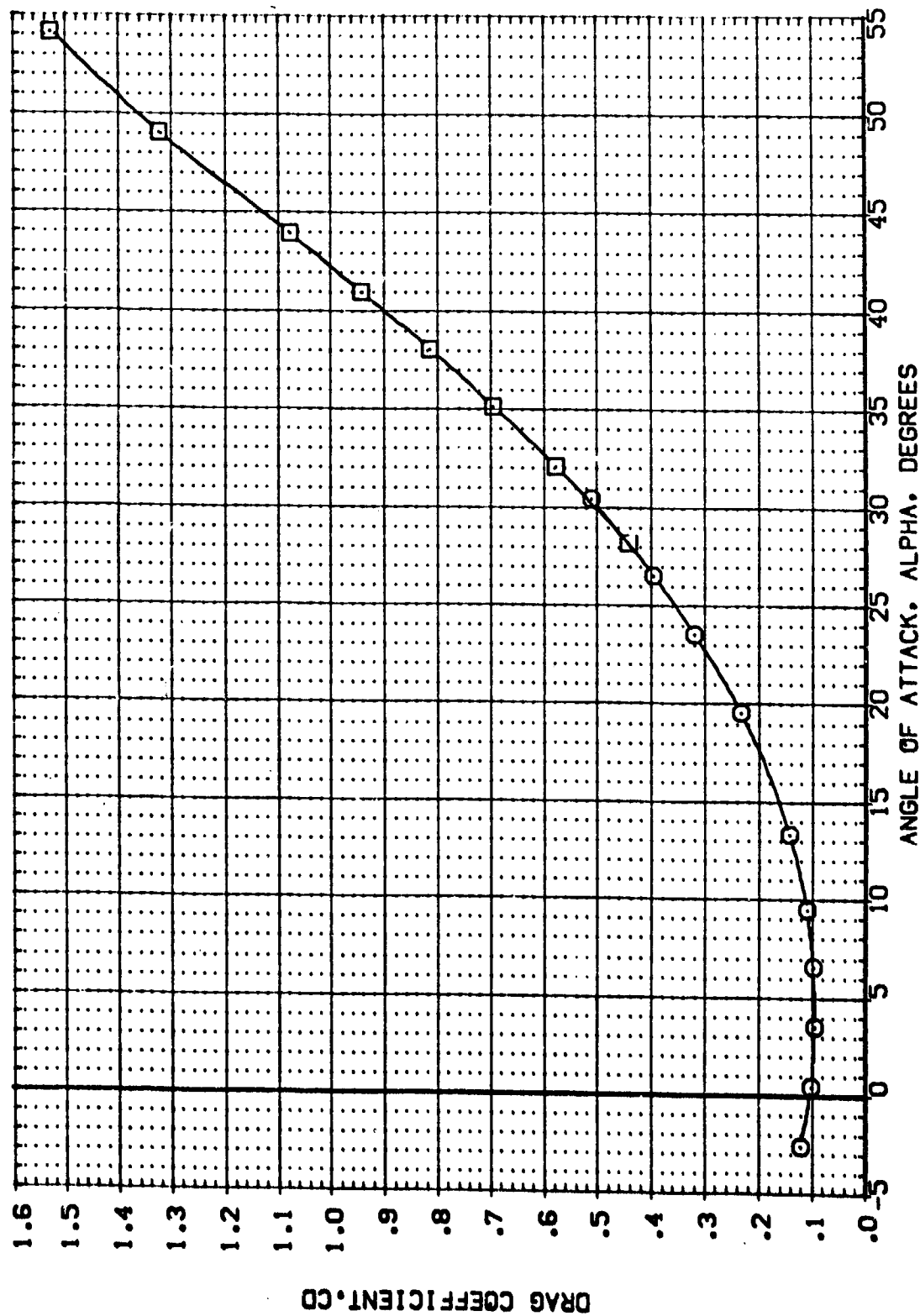


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BBX066)
(BBX048)

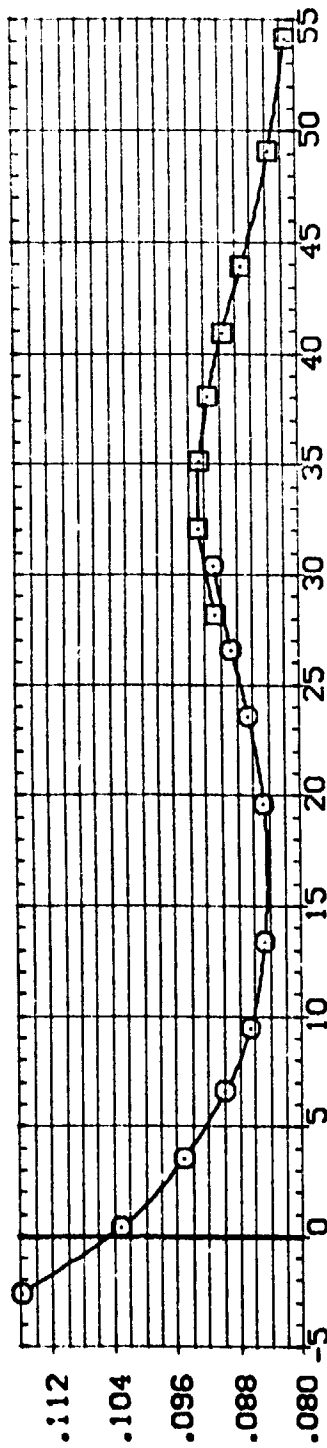
APES 3.5-160 0A11B (B10F4C507GNG)(V87E18)(V5RS)
APES 3.5-160 0A11B (B10F4C507GNG)(V87E18)(V5RS)

ELEVON RUDDER SPOILER BOFLAP

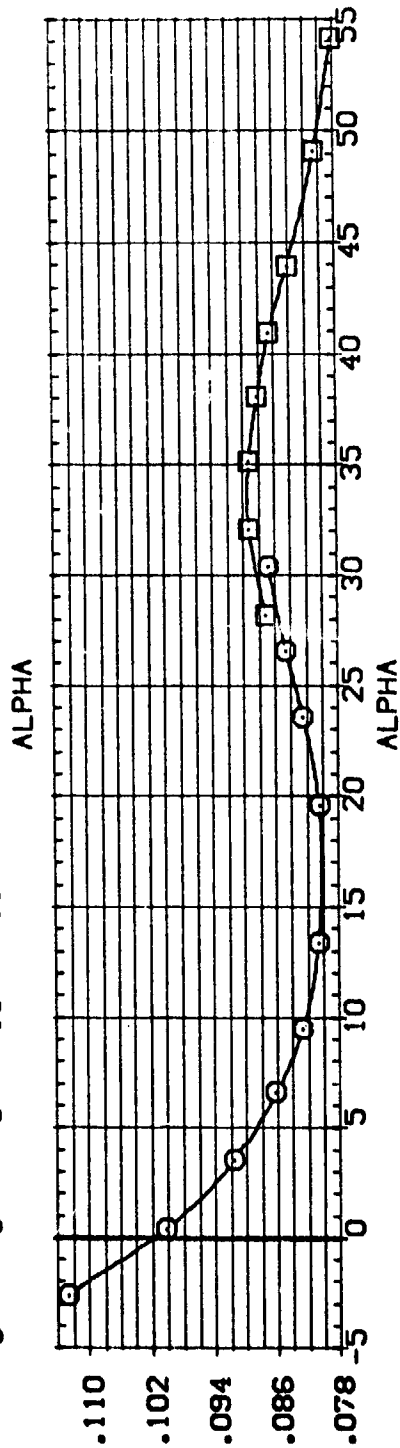
.000
.000
54.920
-14.250

REFERENCE INFORMATION

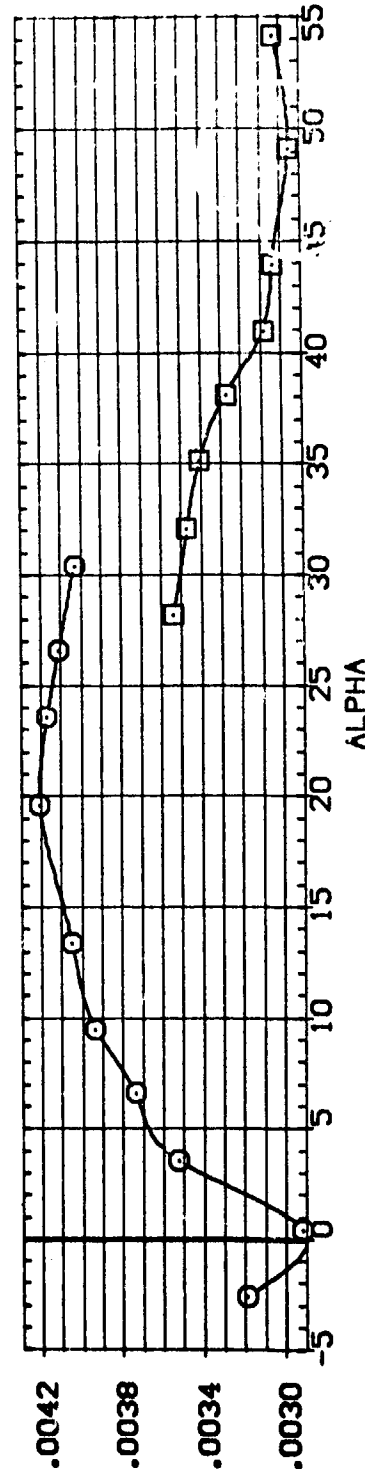
SREF 2690.0000 SI, FT.
LREF 474.8100 IN.
SREF 936.6800 IN.
XPRP 1076.4800 IN.
YPRP 400.0000 IN.
ZPRP 400.0000 IN.
SCALE .0150



CA



CAF



CAB

FIG. 2.8.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (88X048) ☐ CONFIGURATION DESCRIPTION: AYES 3.5-160 CAL1B (810F4C507M348)(V87E18)(V5R5) ELEVON RUDDER SPOONK BOFLAP REFERENCE INFORMATION: SQ.FT.

AYES 3.5-160 CAL1B (810F4C507M348)(V87E18)(V5R5) -40.000 .000 54.920 -14.250 SREF 269.0100 IN.

AYES 3.5-160 CAL1B (810F4C507M348)(V87E18)(V5R5) -40.000 .000 54.920 -14.250 LREF 474.8100 IN.

XBREF 936.6800 IN.

YMRP 1076.4800 IN.

ZMRP .0000 IN.

SCALE 400.0000 IN.

SCALE .0150

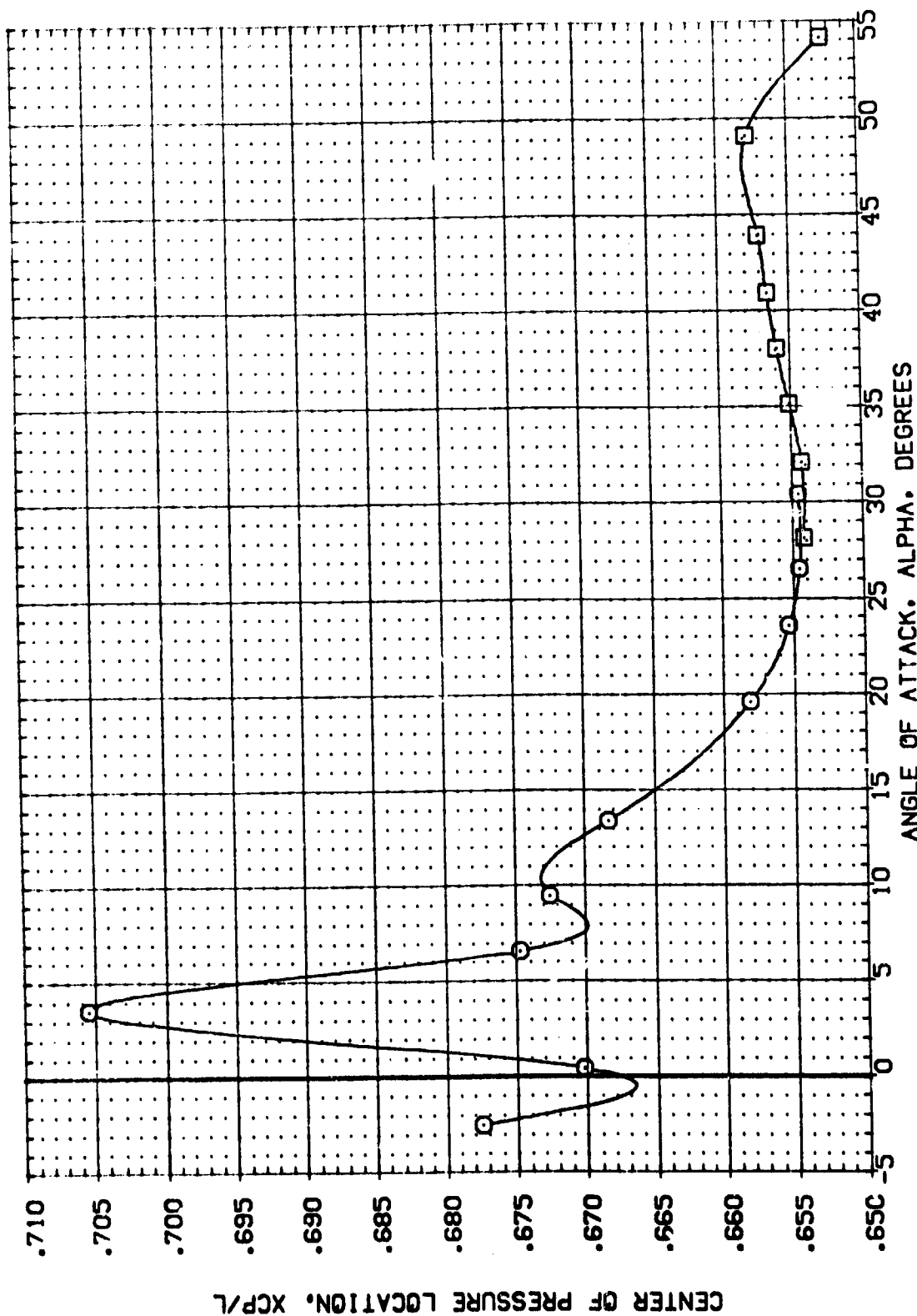


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (BBX056) (BBX018) CONFIGURATION DESCRIPTION: AYES 3.5-160 OA11B (B10F4C507NG-8) (V87E18) (V5K5) AYES 3.5-160 OA11B (B10F4C507NG-8) (V87E18) (V5K5) ELEVON: -40.000 -40.000 RUDDER: .000 .000 SPOBRK: 54.920 54.920 BOFLAP: -14.250 -14.250 REFERENCE INFORMATION: SREF 2690.0070 50. FT. LREF 474.8100 IN. BREF 936.5800 IN. XMRP 1076.4800 IN. YMRP 400.0000 IN. ZMRP 400.0000 IN. SCALE: .0150

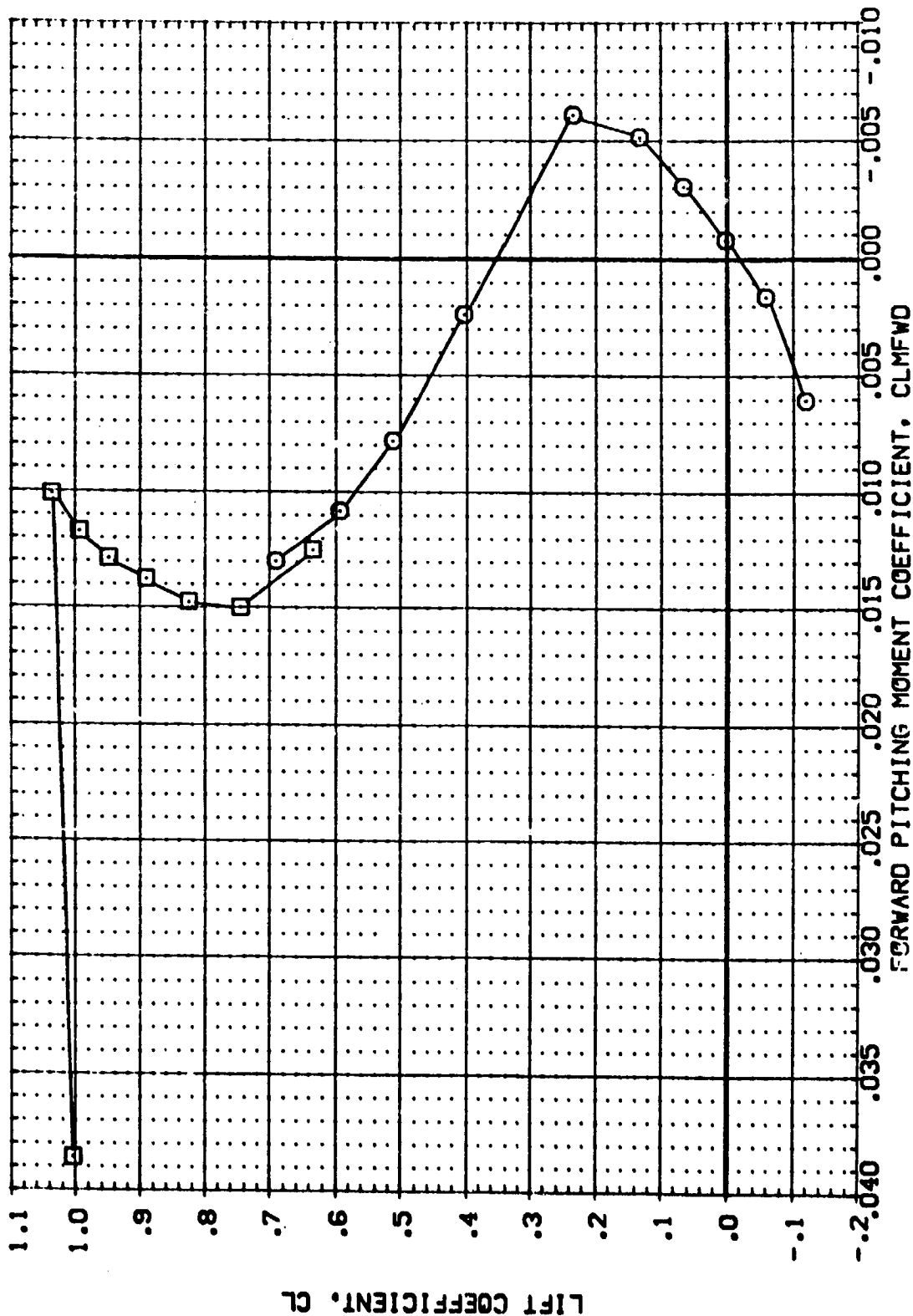


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(BBX066)	AXES 3.5-160 0A118 (810F4C507H3A8)(V87E18)(V5K5)	-40.000	.000	54.920	-14.250	SREF 2690.0000 50.0
(BBX048)	AXES 3.5-160 0A118 (810F4C507H3A8)(V87E18)(V5K5)	-40.000	.000	54.920	-14.250	LREF 474.8100 1N
						BREF 936.6800 1N
						XTRP 1076.4800 1N
						YTRP .0000 1N
						ZTRP .0000 1N
						SCALE 400.0000 1N

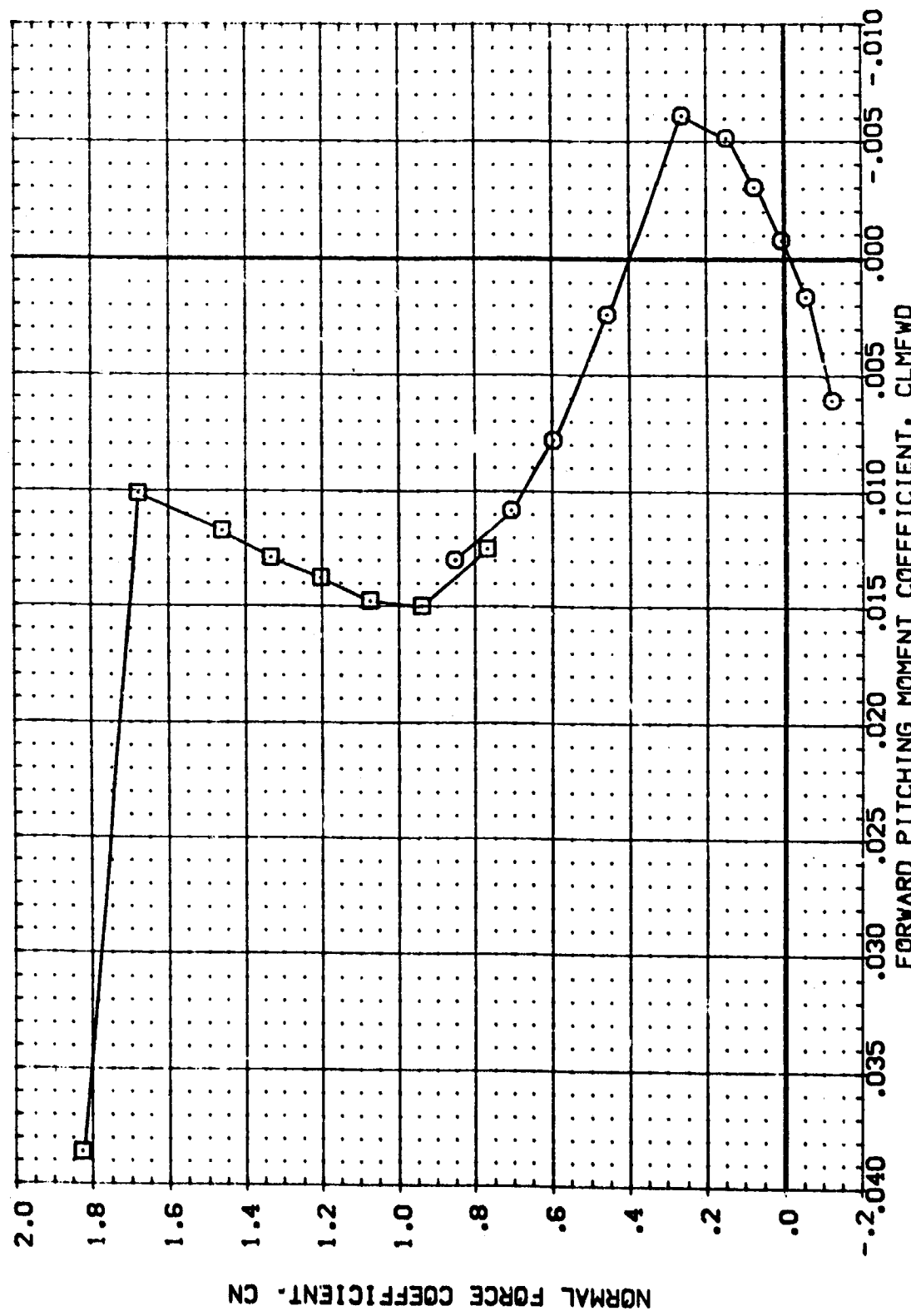


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBO	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX055)	AMES 3.5-160 CA11B (810F4C507K3G8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX048)	AMES 3.5-160 CA11B (810F4C507K3G8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6200 IN.
						ATRP 1076.4800 IN.
						THRP 400.0000 IN.
						ZTRP 400.0150
						SCALE

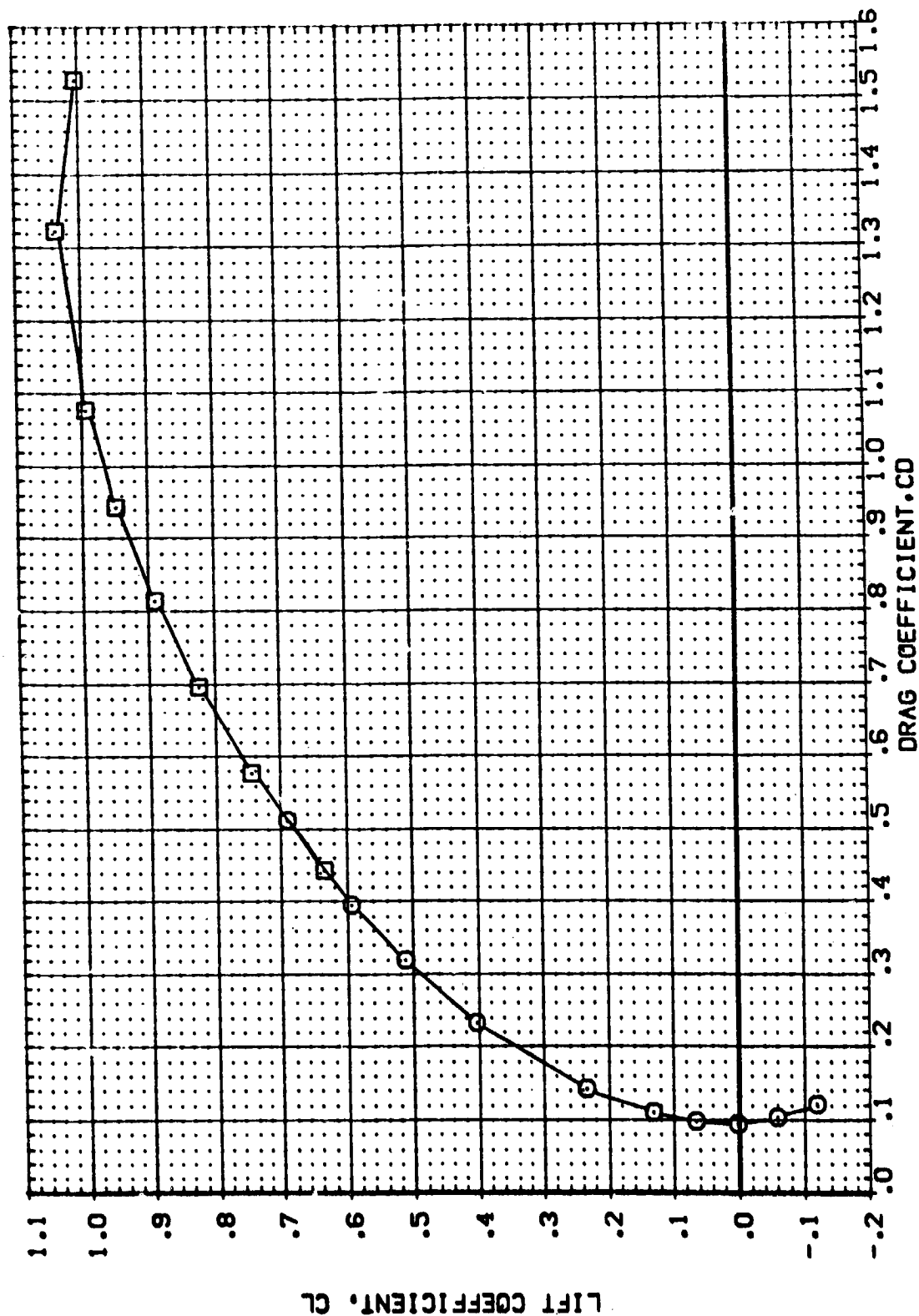


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOELAP	REFERENCE INFORMATION
(ABX065)	AVES 3.5-160 OA11B (B10F4CS070N8)(V87E18)(V5R5)	-40.000	.000	54.920	-14.250	SREF 2690.0070 SC.FT.
(ABX048)	AVES 3.5-160 OA11B (B10F4CS070N8)(V87E18)(V5R5)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6803 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

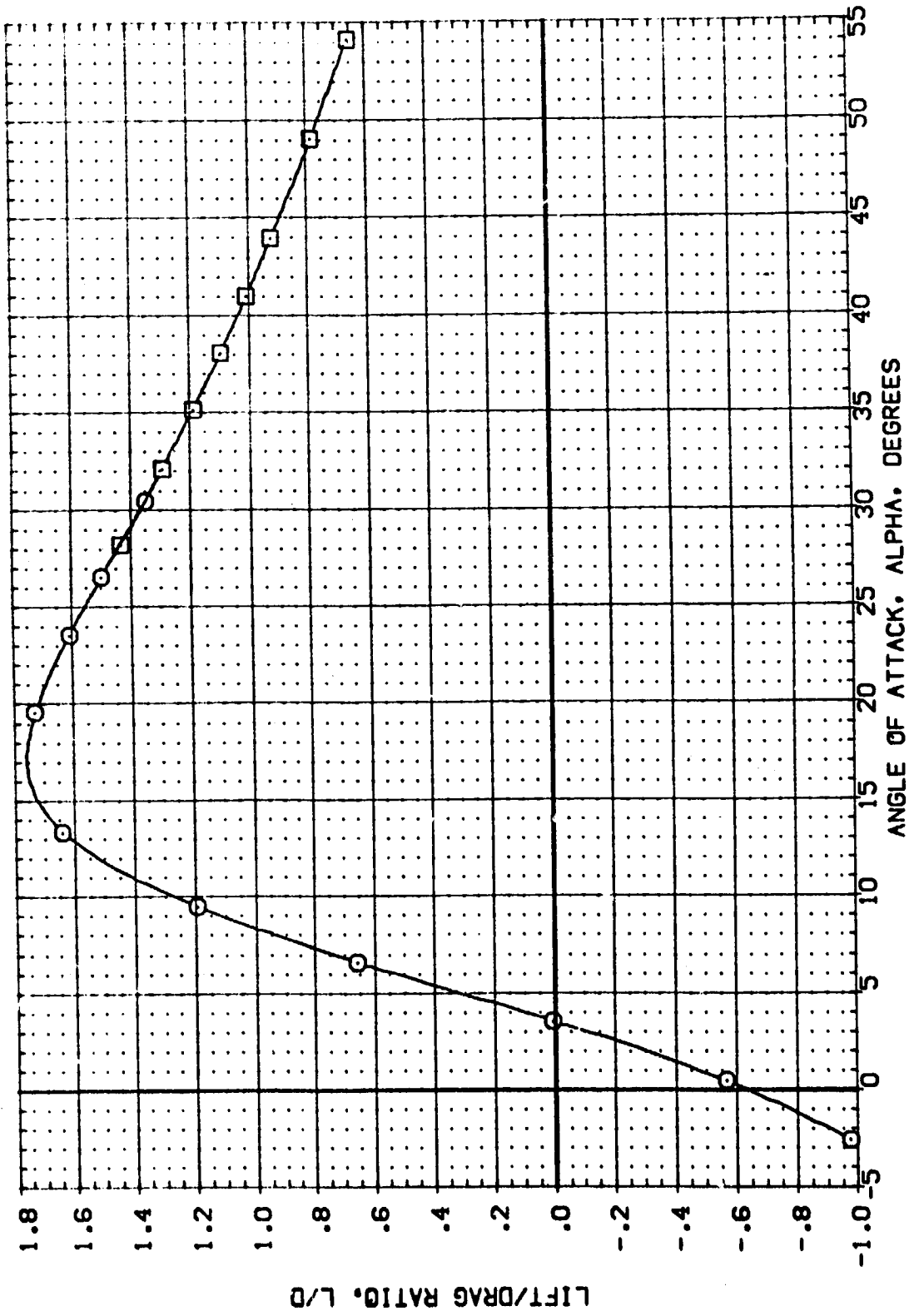


FIG. 2.B.1 MACH 5.26 -40 DEGREE ELEVON EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BD/LAP	REFERENCE INFORMATION
(880009)	AVES 3.5-160 CA118 (B) OF AC5073GN8 (V87E18) (VS95)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(880010)	AVES 3.5-160 CA118 (B) OF AC5073GN8 (V87E18) (VS95)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(880053)	AVES 3.5-160 CA118 (B) OF AC5073GN8 (V87E18) (VS95)	-40.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

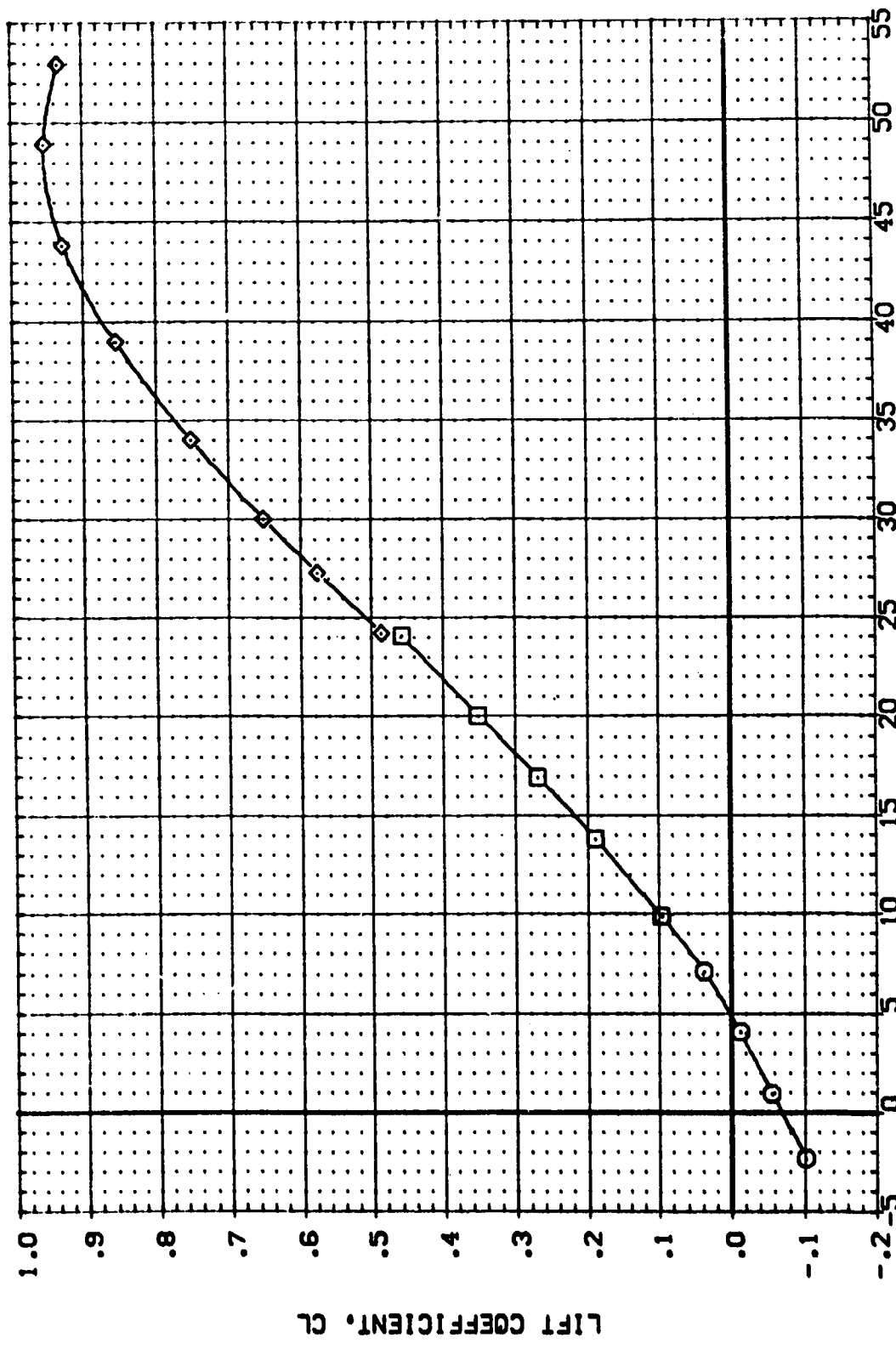


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(BX0053)	AVES 3.5-160 OA11B (B10F4CS07N3-8)(V87E18)(V5K5)	-10.000	.003	54.920	-14.250	SRCE 2690.0000 SQ.FT.
(BX0010)	AVES 3.5-160 OA11B (B10F4CS07N3-8)(V87E18)(V5K5)	-10.000	.000	54.920	-14.250	LSCE 174.8100 IN.
(BX0053)	AVES 3.5-160 OA11B (B10F4CS07N3-8)(V87E18)(V5K5)	-10.000	.000	54.920	-14.250	BRCE 538.6900 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

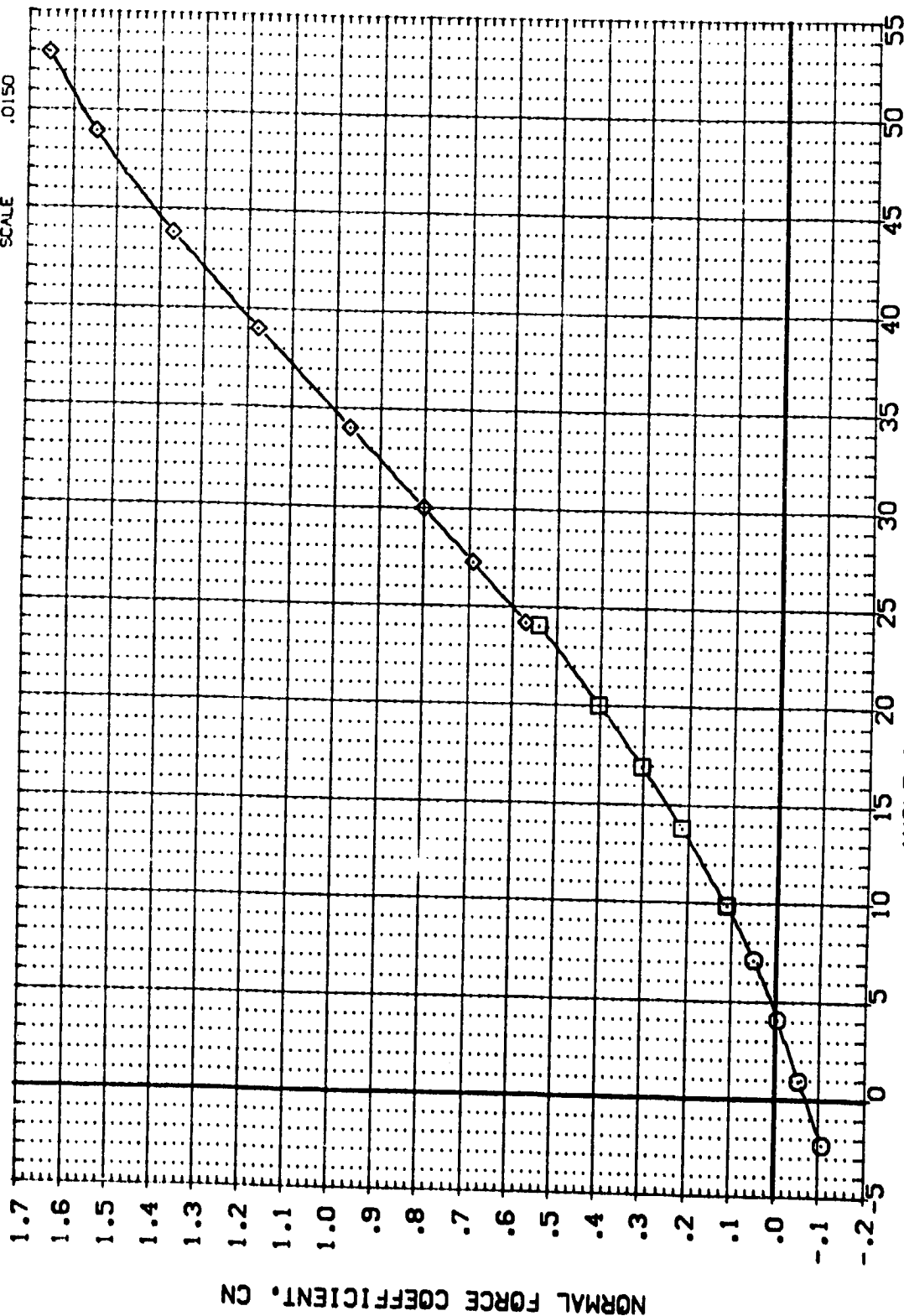


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(B8K009)	AVES 3.5-160 DA118 (B10F4C507G48)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(B8K010)	AVES 3.5-160 DA118 (B10F4C507G48)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(B8K053)	AVES 3.5-160 DA118 (B10F4C507G48)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

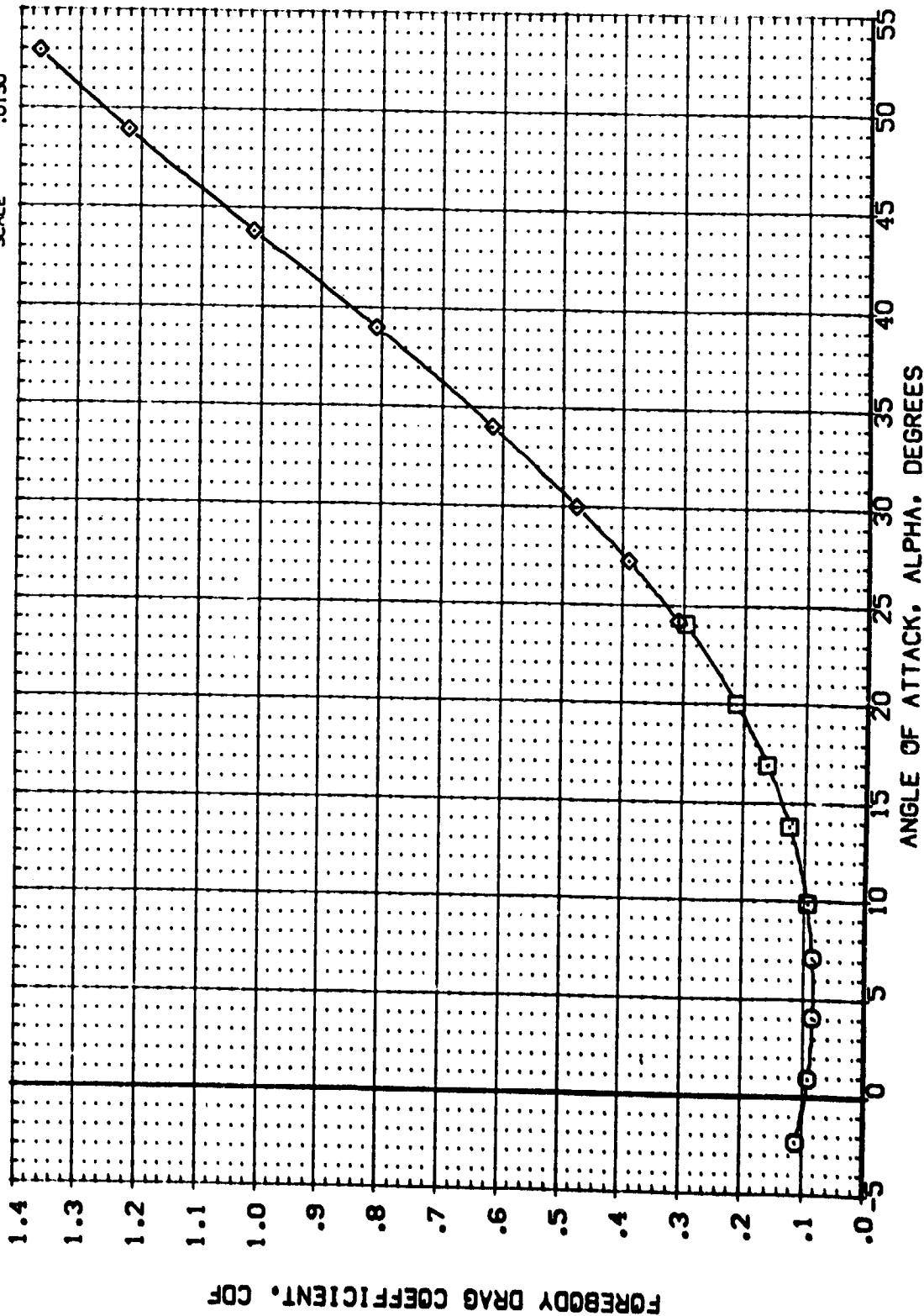


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX009)	AVES 3.5-160 DA11B (B10F4C507H3V8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	STEF 2690.0000 52.FT.
(BBX010)	AVES 3.5-160 DA11B (B10F4C507H3V8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX053)	AVES 3.5-160 DA11B (B10F4C507H3V8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	BREF 936.6900 IN.
						XMRP 1076.4300 IN.
						YMRP 400.0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

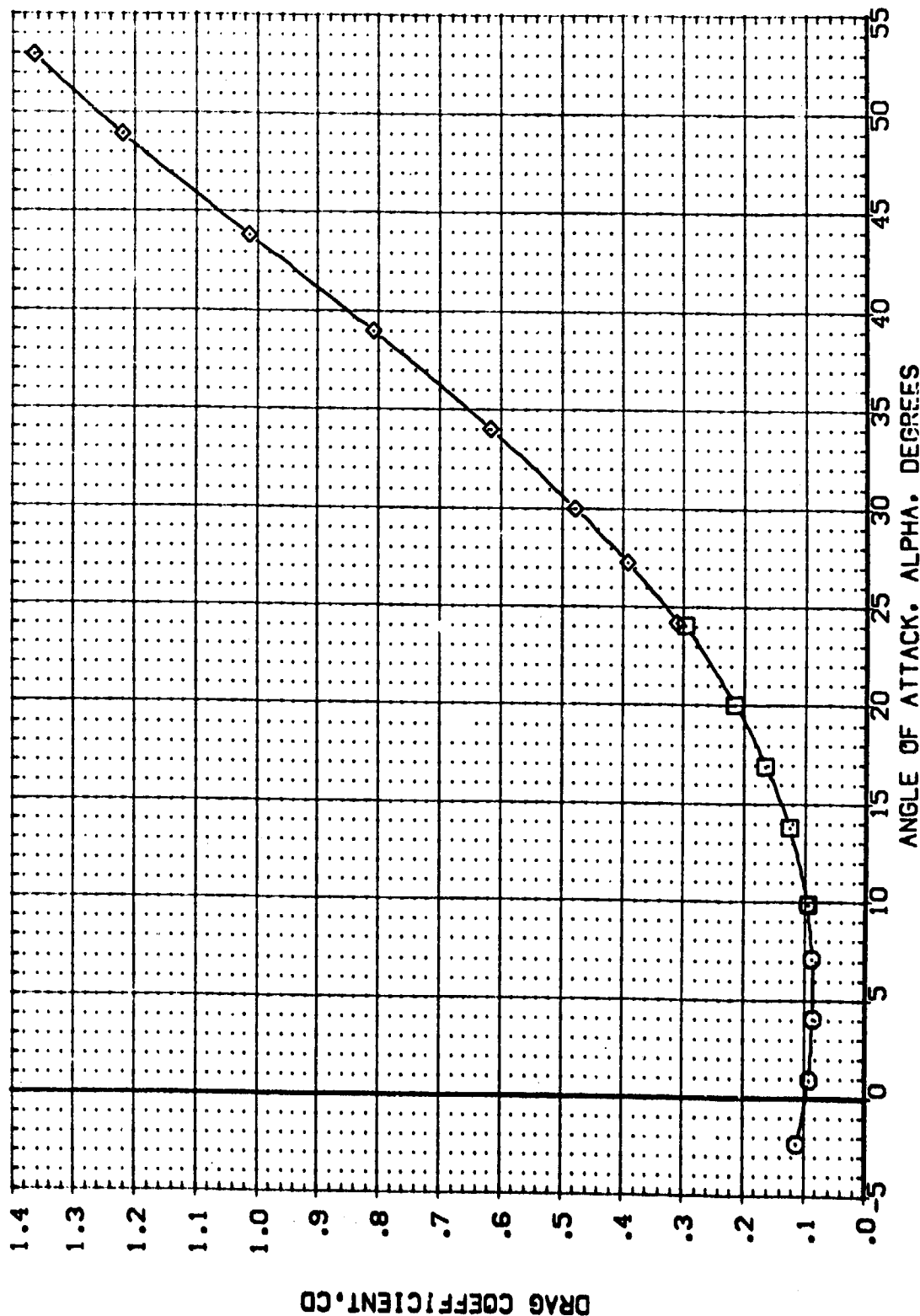
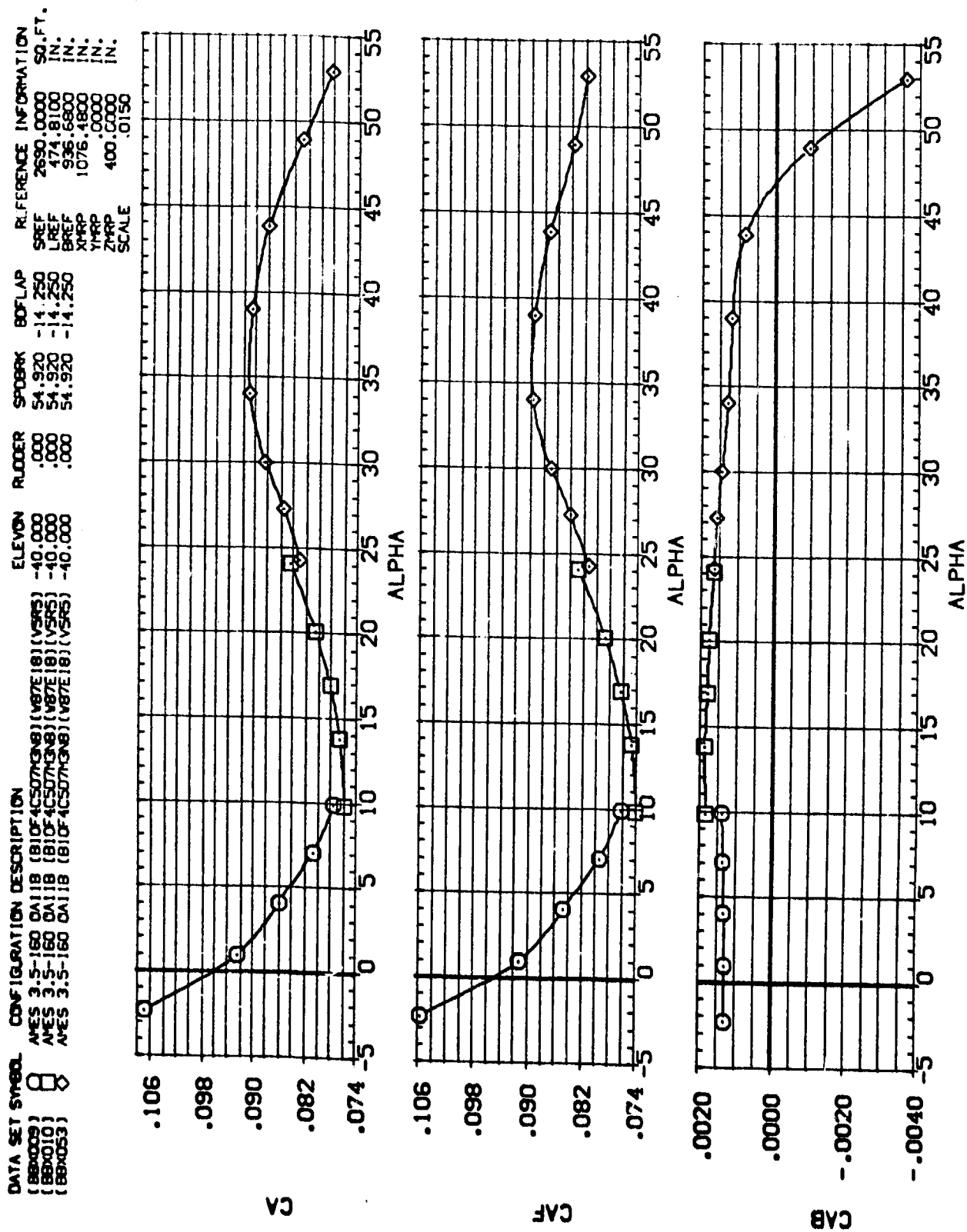


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32



(A)MACH = 7.32

DATA SET SYMBOL: (88X009) (88X010) (88X053)

CONFIGURATION DESCRIPTION:
 AMES 3.5-160 CA11B (81DF4C507H3N8)(V87E18)(V5K5)
 AMES 3.5-160 CA11B (81DF4C507H3N8)(V87E18)(V5K5)
 AMES 3.5-160 CA11B (81DF4C507H3N8)(V87E18)(V5K5)

ELEVON: -40.000 -40.000 -40.000

RUDER: .000 .000 .000

SPOILER: 54.920 54.920 54.920

BOFLAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION:
 SREF: 2690.0000
 LREF: 474.8100
 BREF: 938.5800
 XMRP: 1076.4800
 YMRP: .0000
 ZMRP: 400.0000
 SCALE: .0150

SQ.FT.: N. N. N. N. N. N.

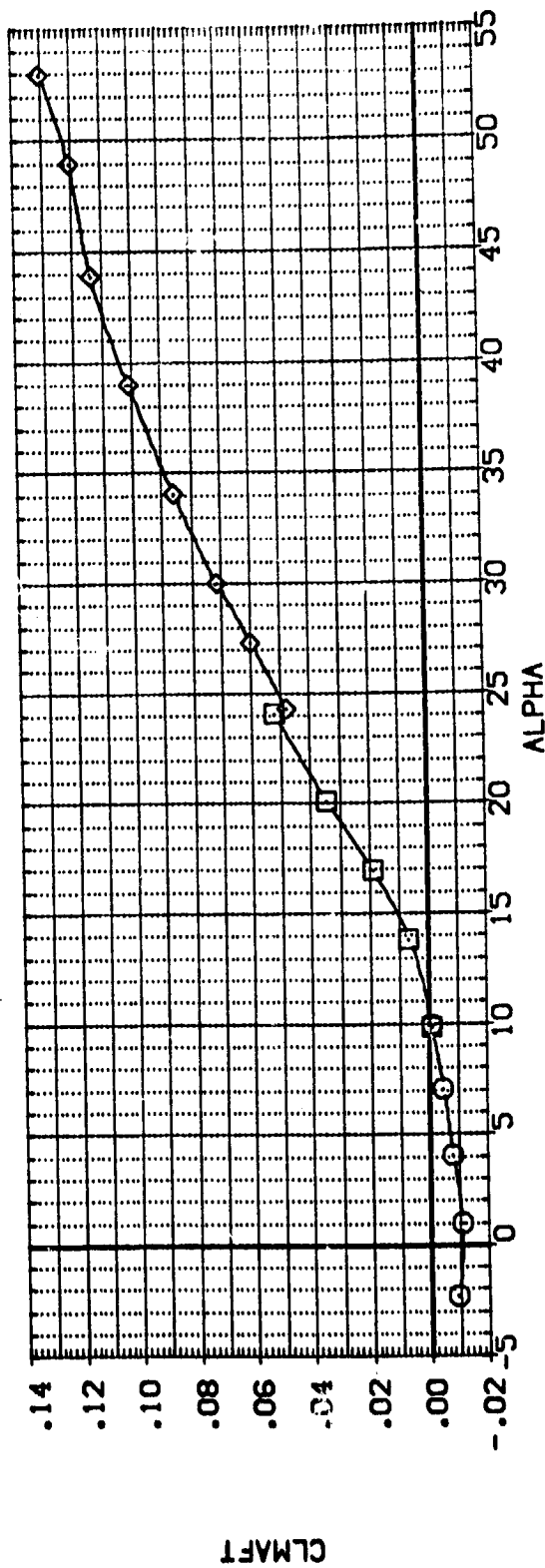
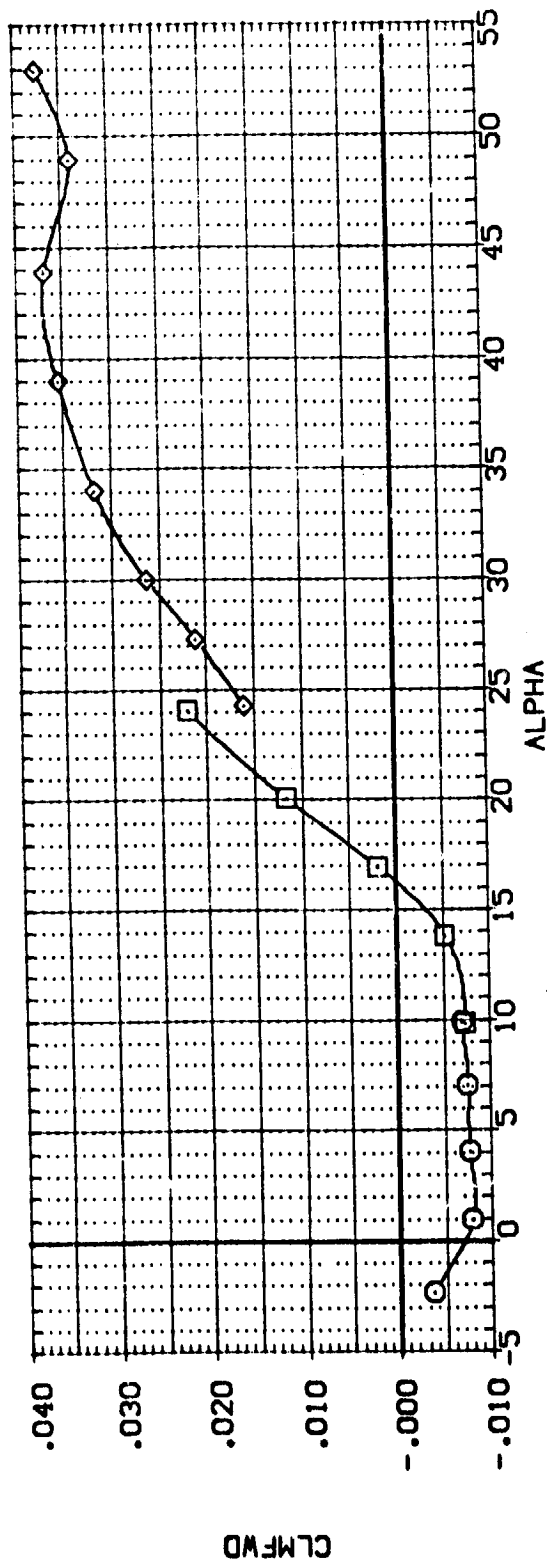


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPORRK	BOFLAP	REFERENCE INFORMATION
(BBK009)	AVES 3.5-160 DA11B (B1D-4C507H3-4B) (V87E18) (V59S)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBK010)	AVES 3.5-160 DA11B (B1D-4C507H3-4B) (V87E18) (V59S)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBK053)	AVES 3.5-160 DA11B (B1D-4C507H3-4B) (V87E18) (V59S)	-40.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YPRP 1076.4800 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

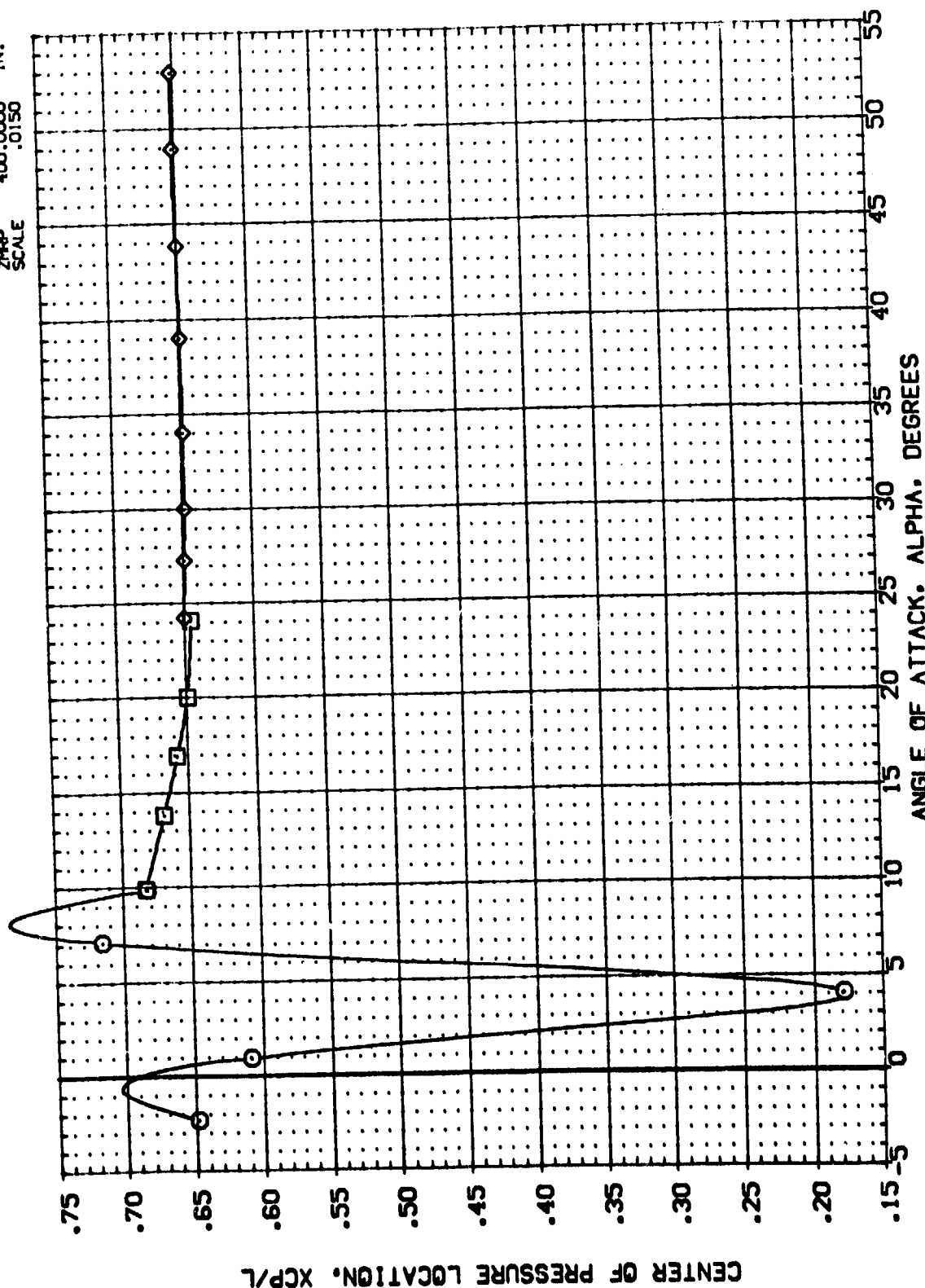


FIG. 2.8.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBK005)	AVES 3.5-160 DAI1B (B1D'4C507H3A8)(V87E18)(V5K5)	-40.000	.000	54.920	-14.250	SREF 2590.0000
(BBK010)	AVES 3.5-160 DAI1B (B1D'4C507H3A8)(V87E18)(V5K5)	-40.000	.000	54.920	-14.250	LREF 474.8100
(BBK053)	AVES 3.5-160 DAI1B (B1D'4C507H3A8)(V87E18)(V5K5)	-40.000	.000	54.920	-14.250	BREF 936.8800
						YMRP 1076.4800
						ZMRP .0000
						SCALE 400.0000
						.0150

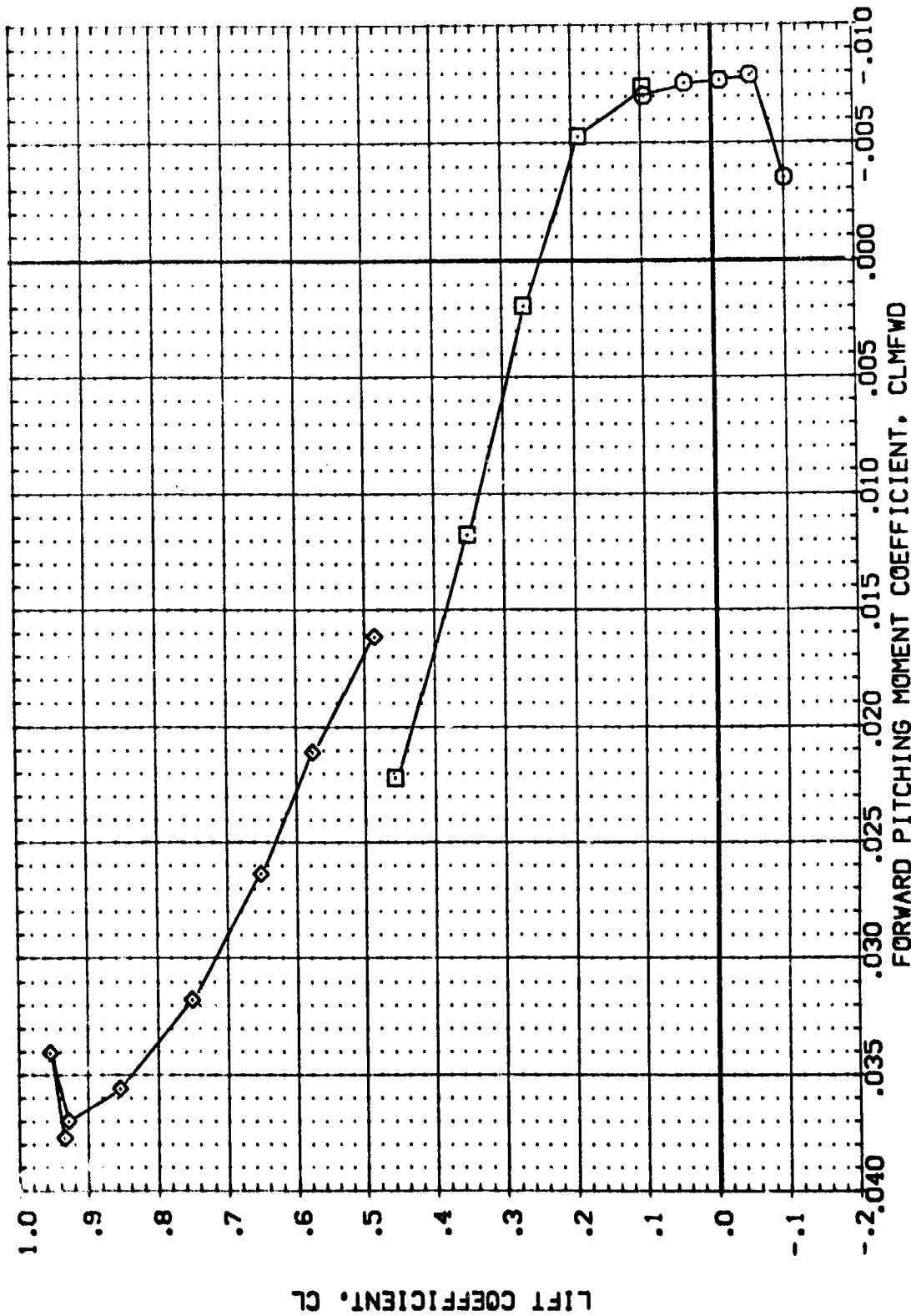


FIG. 2.8.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	FLUDER	SPOBRK	BOFLAP	REFERENCE INFORMATION
(BBK009)	AVES 3.5-160 OA118 (810F4C507GN8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBK010)	AVES 3.5-160 OA118 (810F4C507GN8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBK053)	AVES 3.5-160 OA118 (810F4C507GN8)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XTRP 1076.4800 IN.
						YTRP .0000 IN.
						ZTRP .0000 IN.
						SCALE .0150

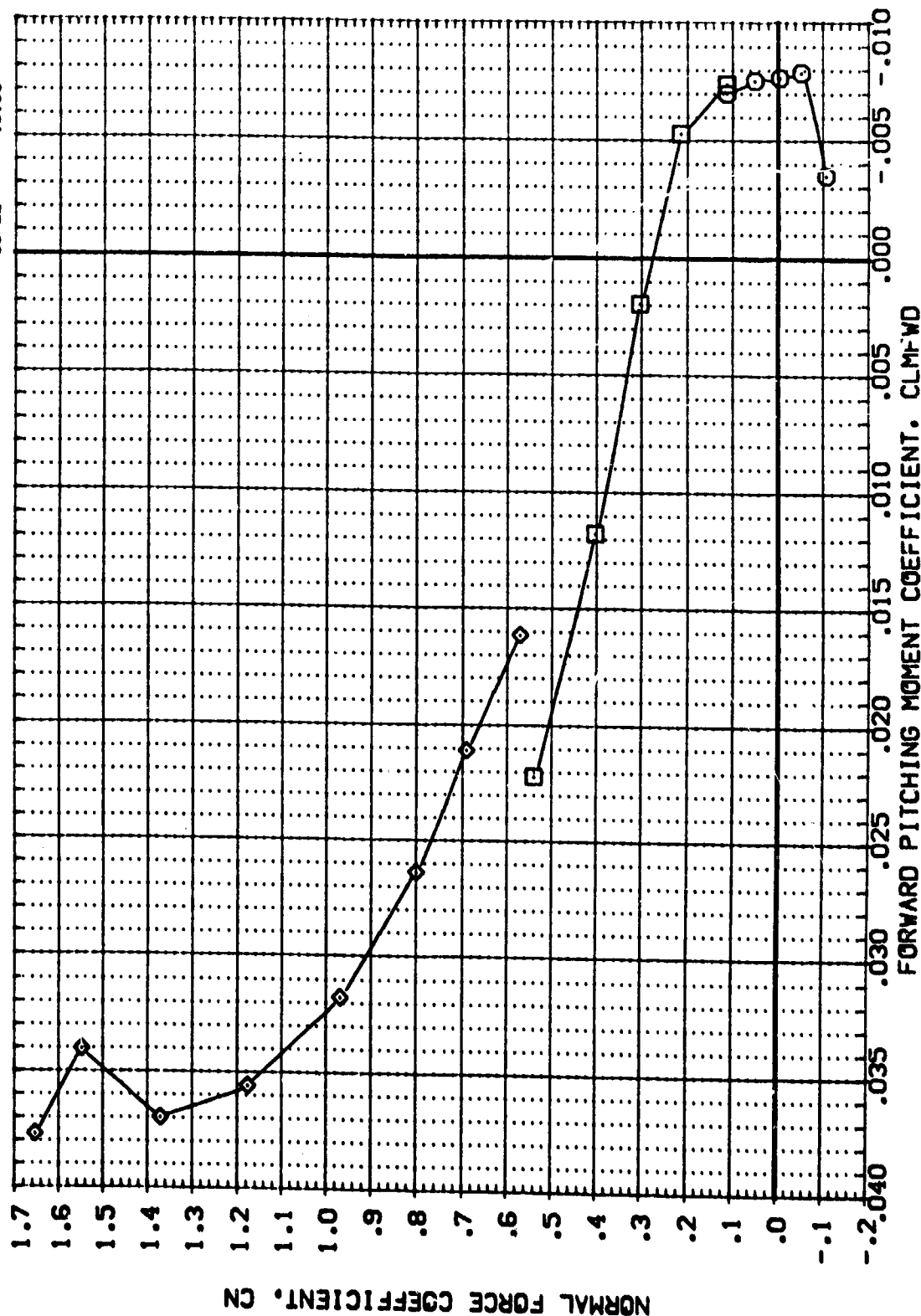


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(58X009)	AVES 3.5-160 DA11B (P127-4C507H3-8) (V87E18) (V59S)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(58X010)	AVES 3.5-160 DA11B (81DF-4C507H3-8) (V87E18) (V59S)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(58X053)	AVES 3.5-160 DA11B (81DF-4C507H3-8) (V87E18) (V59S)	-40.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XRRP 1076.3000 IN.
						YRRP .0000 IN.
						ZRRP 400.0000 IN.
						SCALE .0150

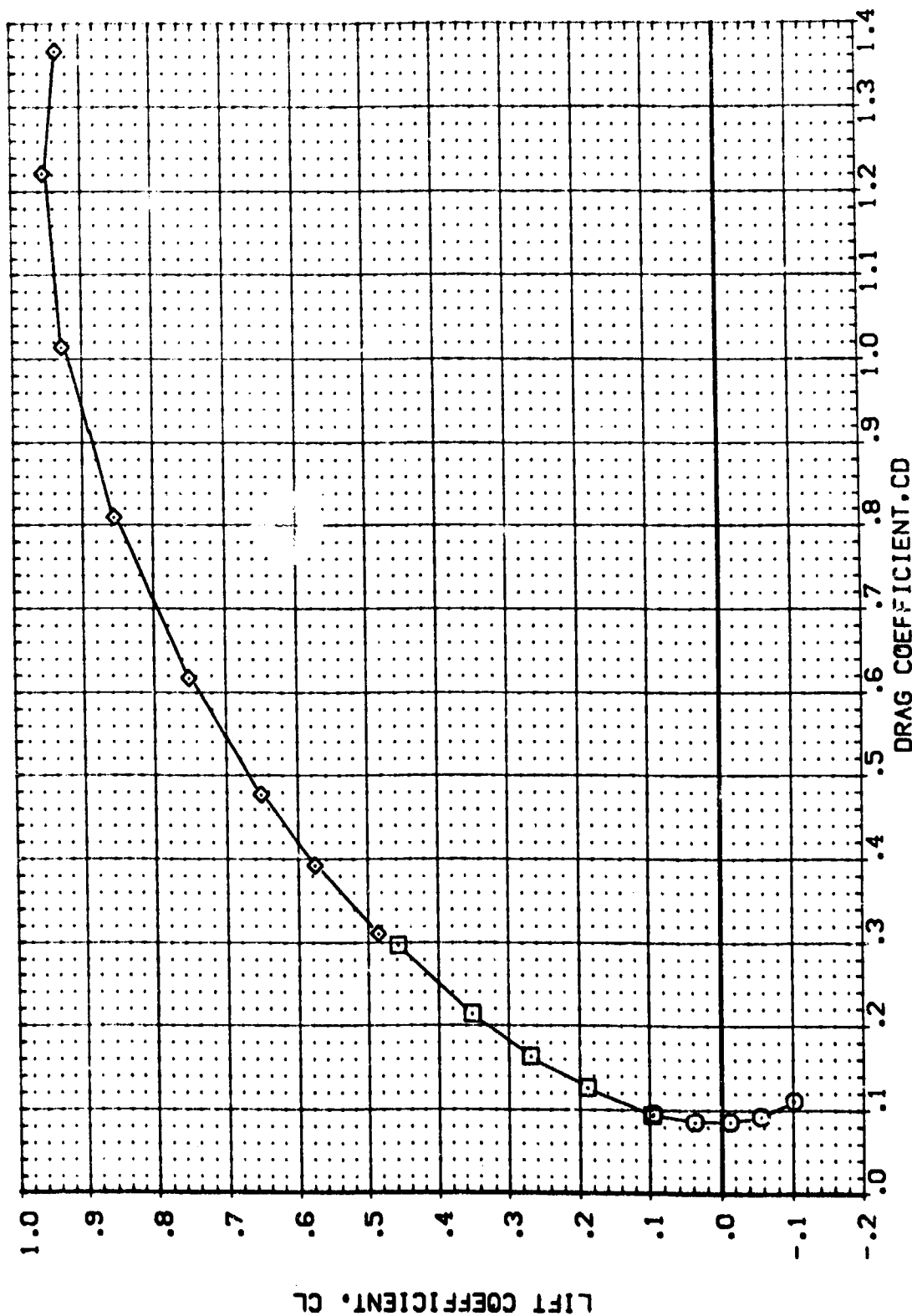


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(ABX009)	AVES 3.5-160 CA118 (B10FACSL/NG.9)(V87E18)(V5R5)	-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(ABX010)	AVES 3.5-160 CA118 (B10FACSL/NG.9)(V87E18)(V5R5)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
(ABX053)	AVES 3.5-160 CA118 (B10FACSL/NG.9)(V87E18)(V5R5)	-40.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YPRP 1076.4800 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

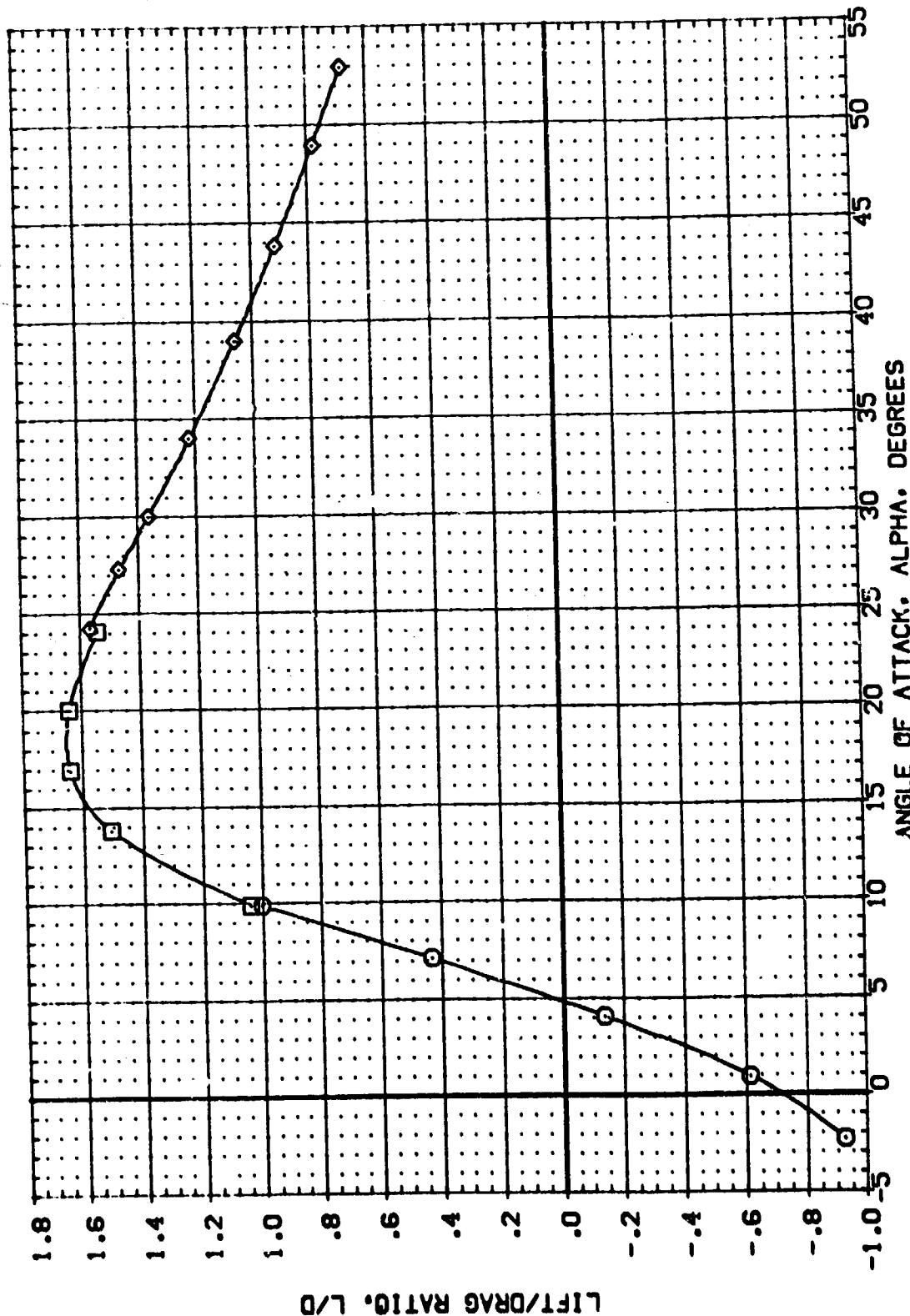


FIG. 2.B.2 MACH 7.32 -40 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL: (BB041) (BB040)

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 DA11B (B10°4C507G4B)(V67E1B)(V5S5)
 AYES 3.5-160 DA11B (B10°4C507G4B)(V67E1B)(V5S5)

ELEVON: -40.000
 RUDDER: .000
 SPOILER: 54.920
 BDFLAP: -14.250

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

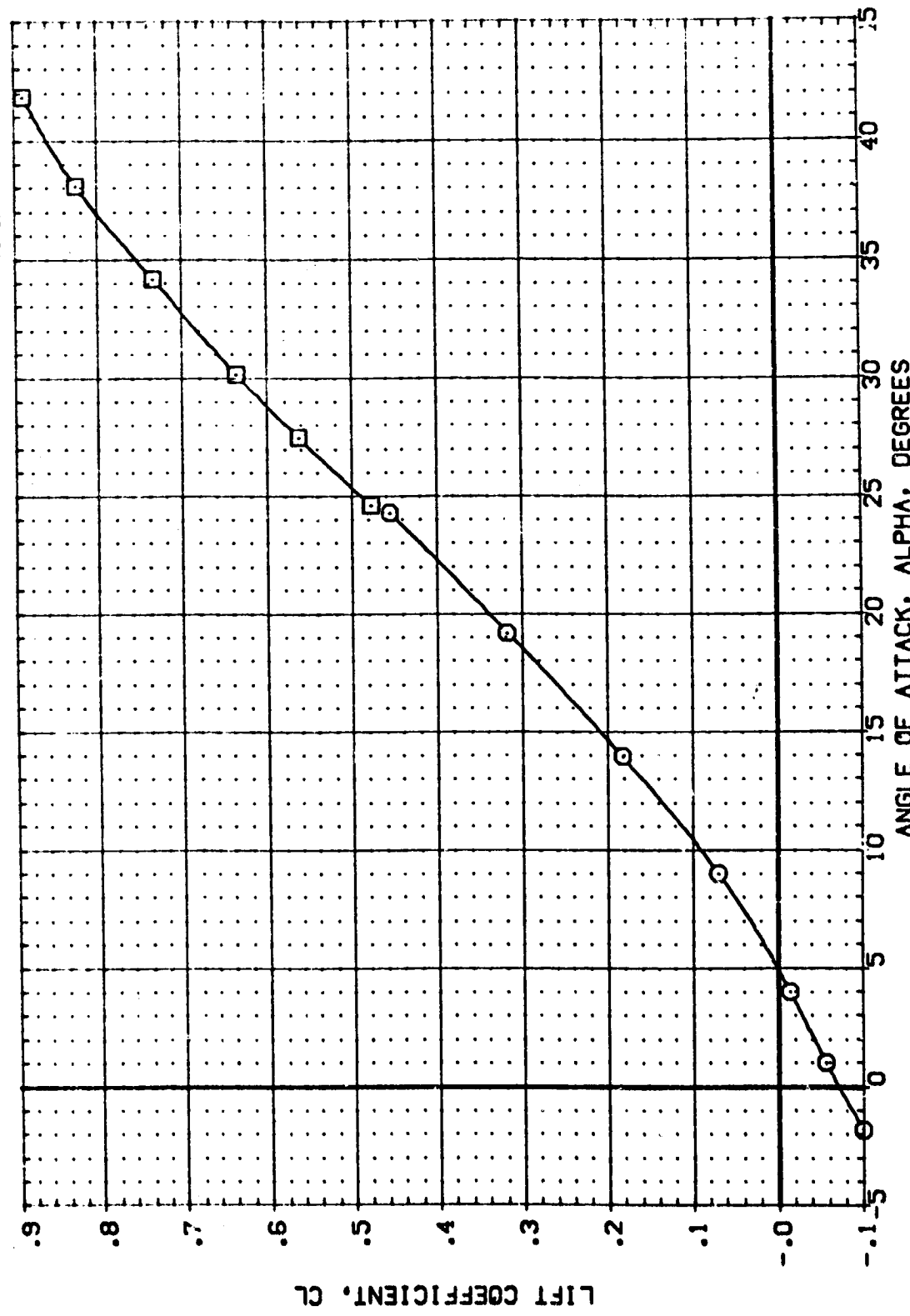


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL: (88X041) (88X040)

CONFIGURATION DESCRIPTION: AYES 3.5-160 CAL18 (B10F4C507KGN8)(V87E18)(V5K5) AYES 3.5-160 CAL18 (B10F4C507KGN8)(V87E18)(V5K5)

ELEVON: -40.000 -40.000

RUDER: .000 .000

SPDBRK: 54.920 54.920

BOFLAP: -14.250 -14.250

REFERENCE INFORMATION:

	SO. FT.
SREF	2630.0000
LREF	474.8100
BREF	936.6800
XTRP	1076.4800
YTRP	.0000
ZTRP	400.0000
SCALE	.0150

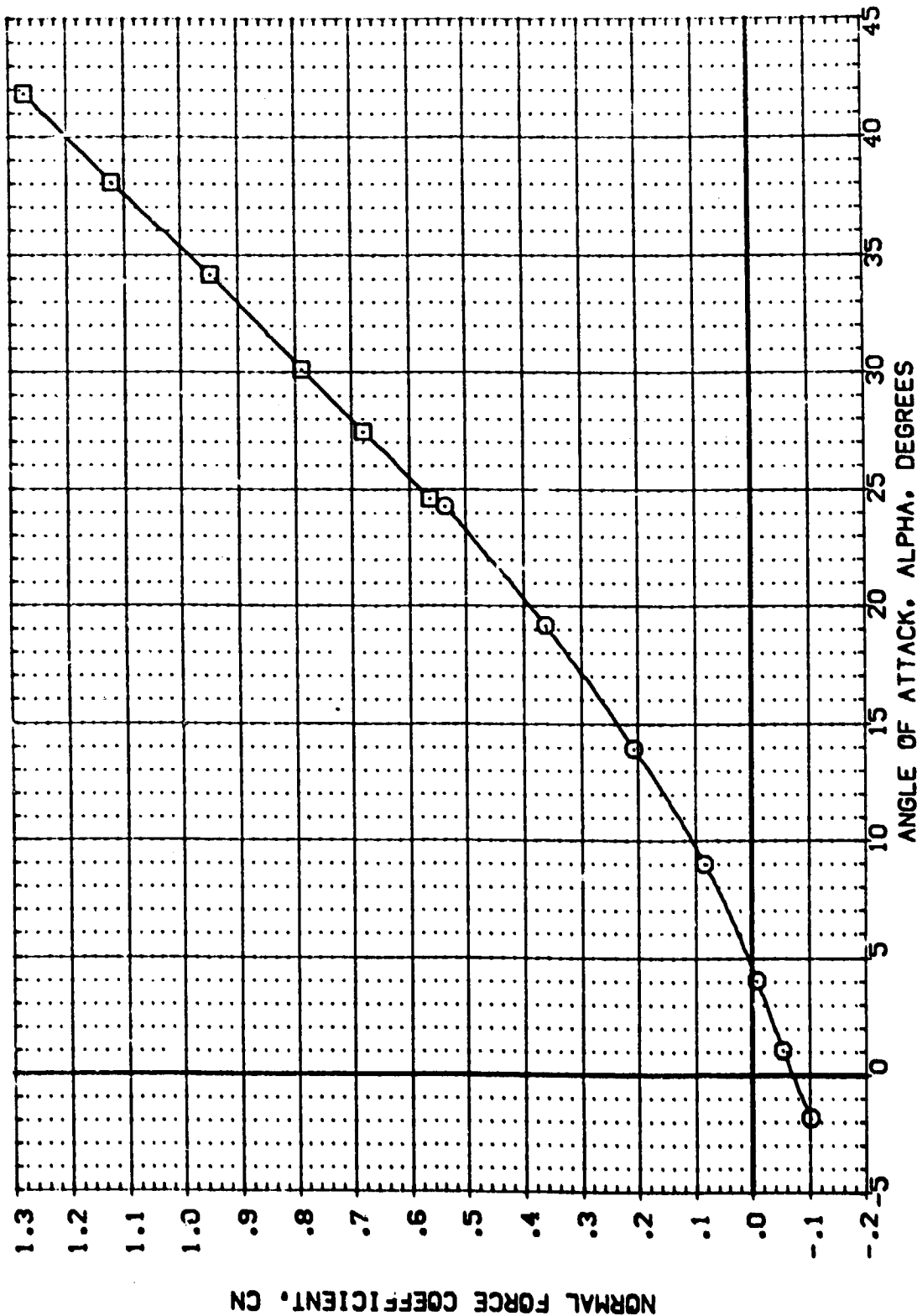


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(B80041)	AVES 3.5-160 0A11B (810F4C507H3-8) (V87E18) (V5R5)	-40.000	.000	54.920	-14.250	SKREF 2690.0000 SO.FT. IN.
(B80040)	AVES 3.5-160 0A11B (810F4C507H3-8) (V87E18) (V5R5)	-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

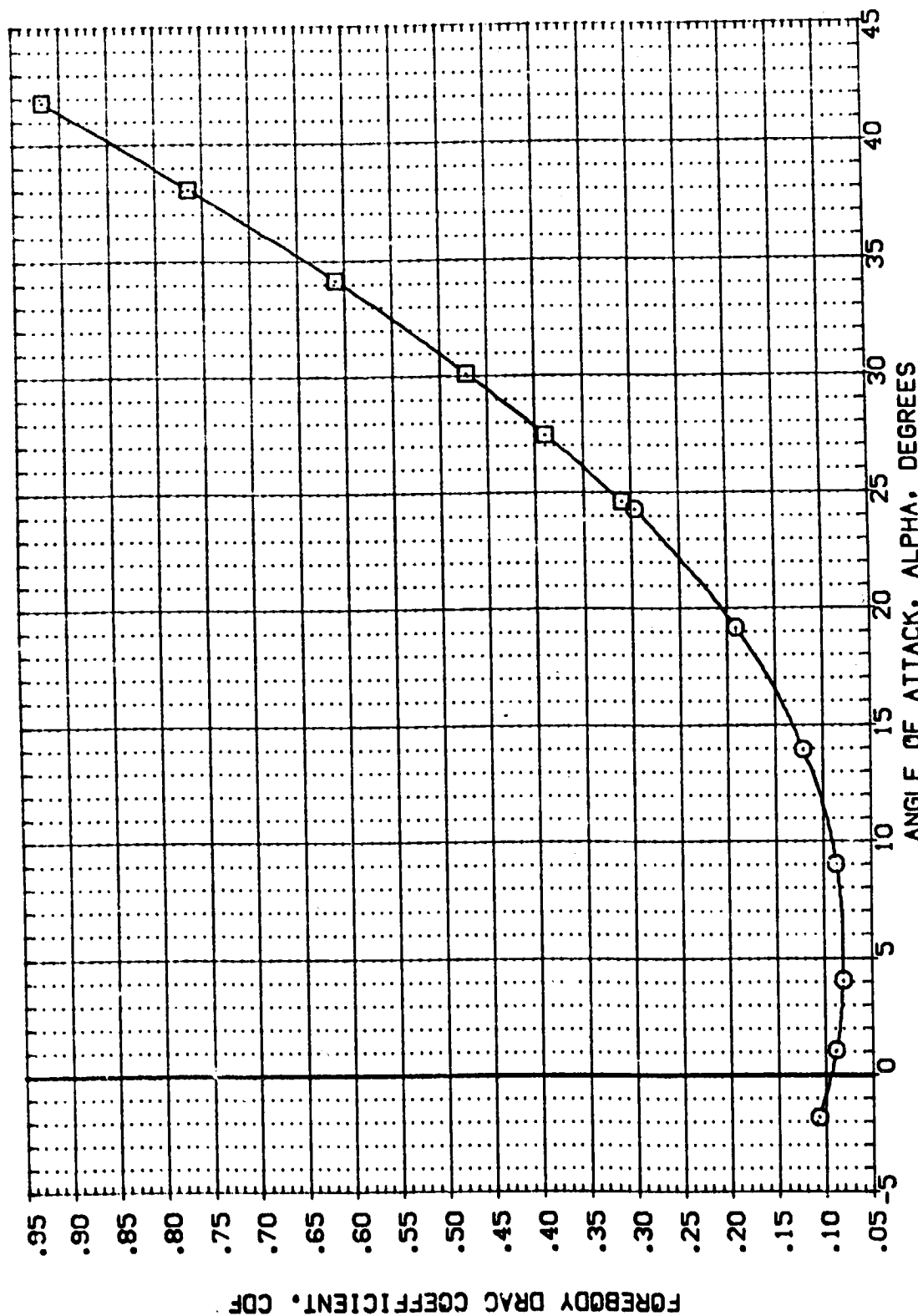



FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL: (BBX041) (BBX040) 
CONFIGURATION DESCRIPTION: AVES 3.5-160 DAI1B (B10F4C507H3-8) (V87E18) (V59S) -40.000
AVES 3.5-160 DAI1B (B10F4C507H3-8) (V87E18) (V59S) -40.000
ELEVON: .000
RUDDER: .000
SPDRK: 54.920
BOFLAP: -14.250
REFERENCE INFORMATION: SREF 2690.0000 50.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XPRP 1076.4800 IN.
YPRP .0000 IN.
ZPRP 400.0000 IN.
SCALE .0150

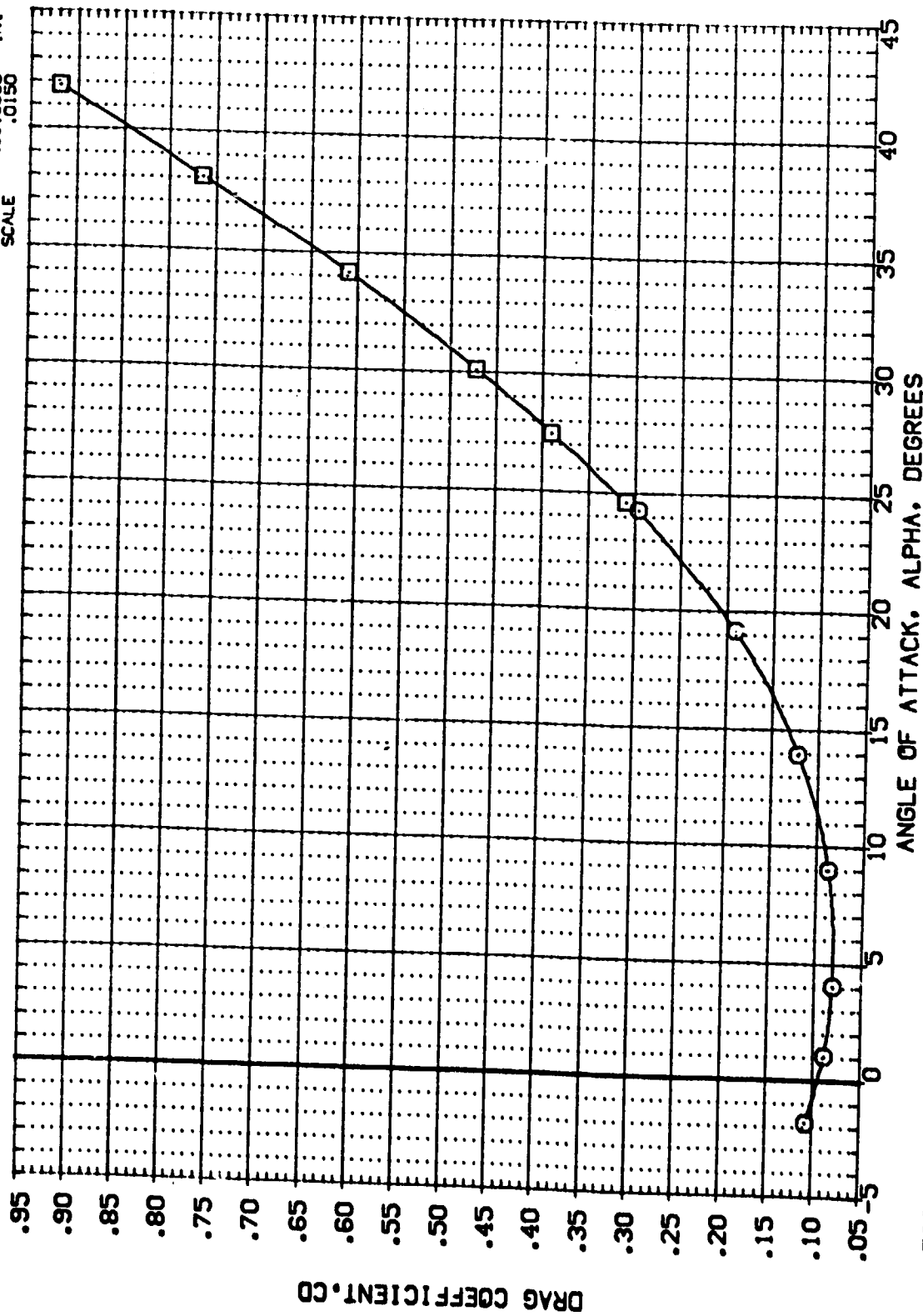


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL: (BBX041) (BBX040)

CONFIGURATION DESCRIPTION: AYES 3.5-160 0A11B (B10F4C507M3-8) (V87E18) (V5RS) AYES 3.5-160 0A11B (B10F4C507M3-8) (V87E18) (V5RS)

REFERENCE INFORMATION: SREF 2690.0000 50. FT. LREF 474.8100 IN. BREF 936.8600 IN. XMRP 1076.4800 IN. YMRP 0.0000 IN. ZMRP 400.0000 IN. SCALE 0.150

BOFLAP: 54.920 -14.250 54.920 -14.250

RUDDER: .000 .000

ELEVON: -40.000 -40.000

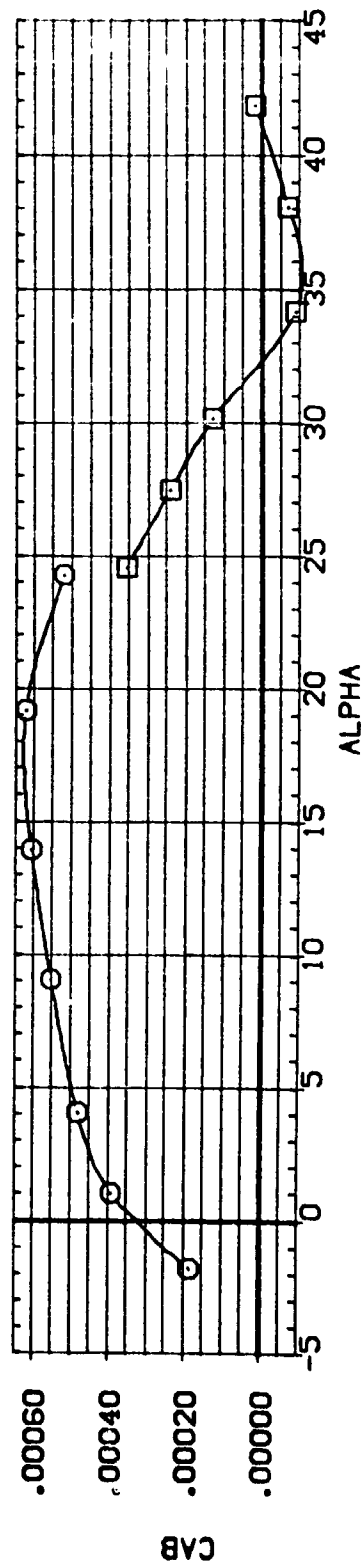
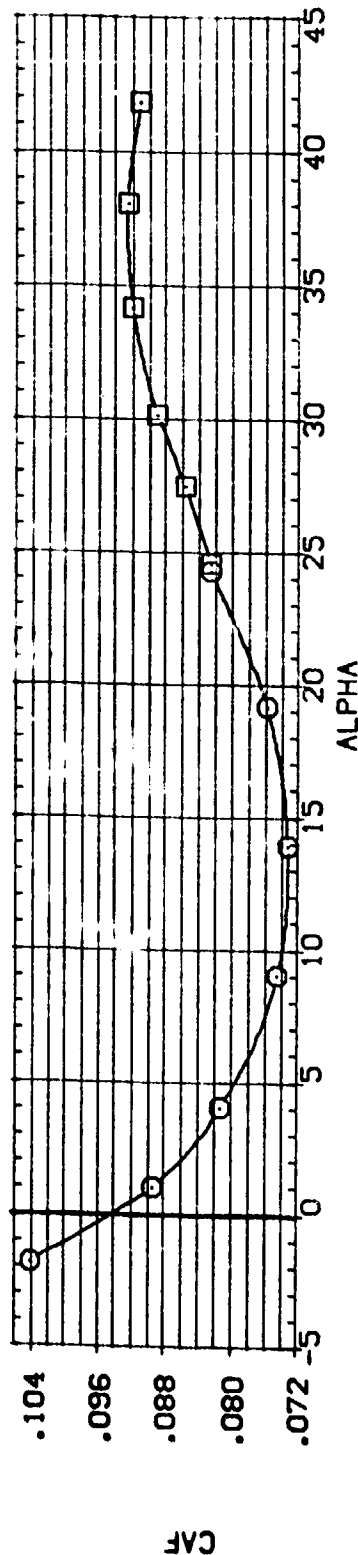
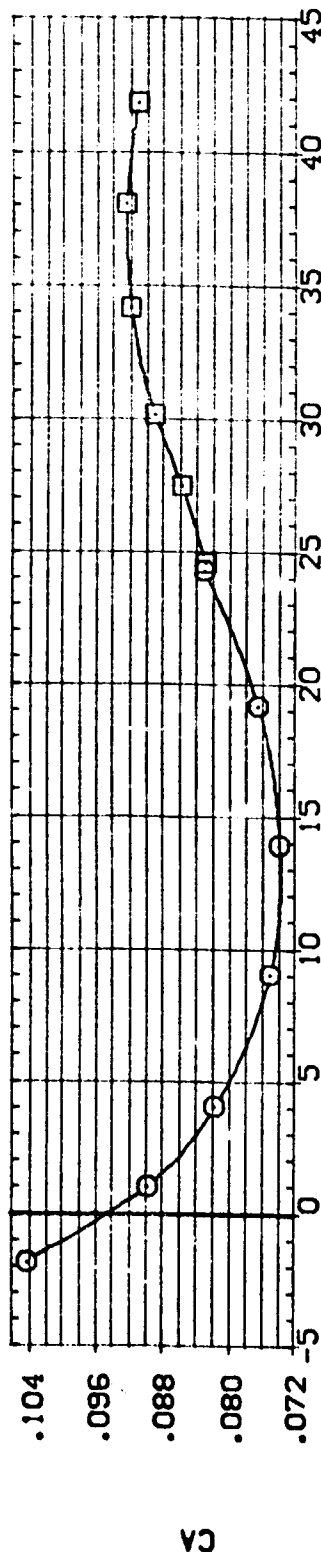


FIG. 2.8.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (BB0041) □ AYES 3.5-160 OA118 (B10F4C507K3N8)(V87E18)(V5K5)
 (BB0040) □ AYES 3.5-160 OA118 (B10F4C507K3N8)(V87E18)(V5K5)

ELEVON RUDDER SPOBRK BOFLAP
 -40.000 .000 54.920 -14.250
 -40.000 .000 54.920 -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

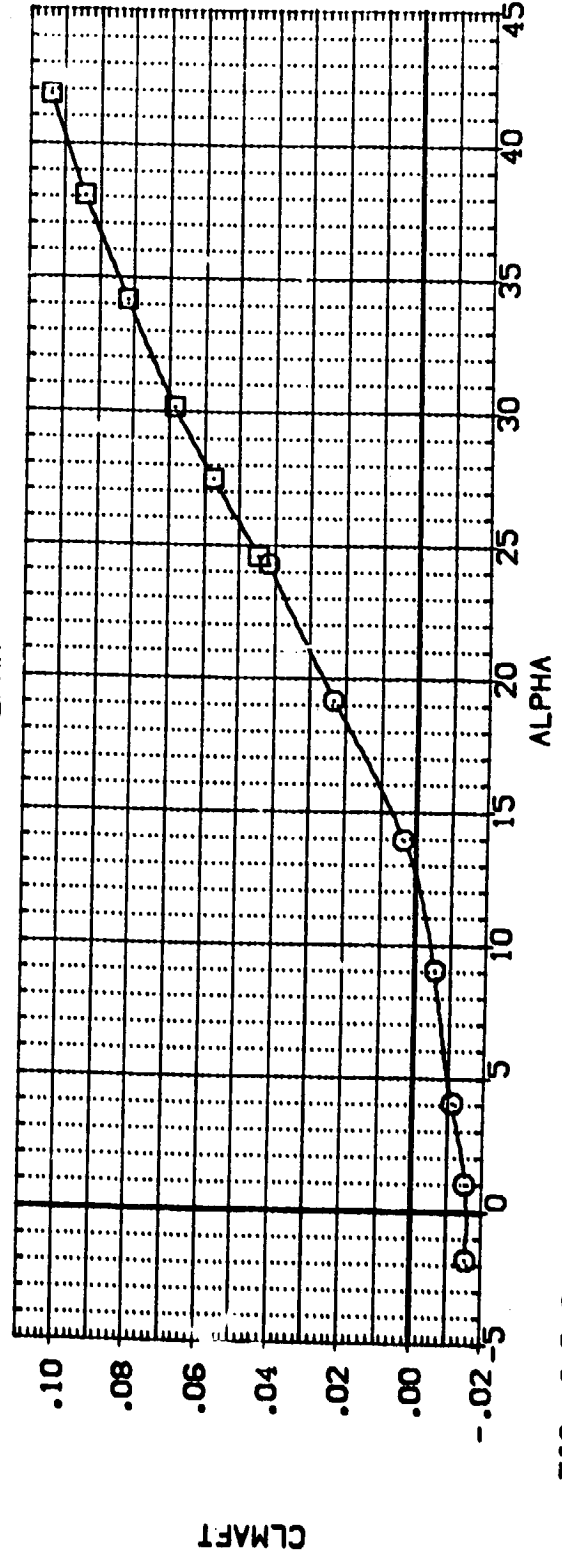
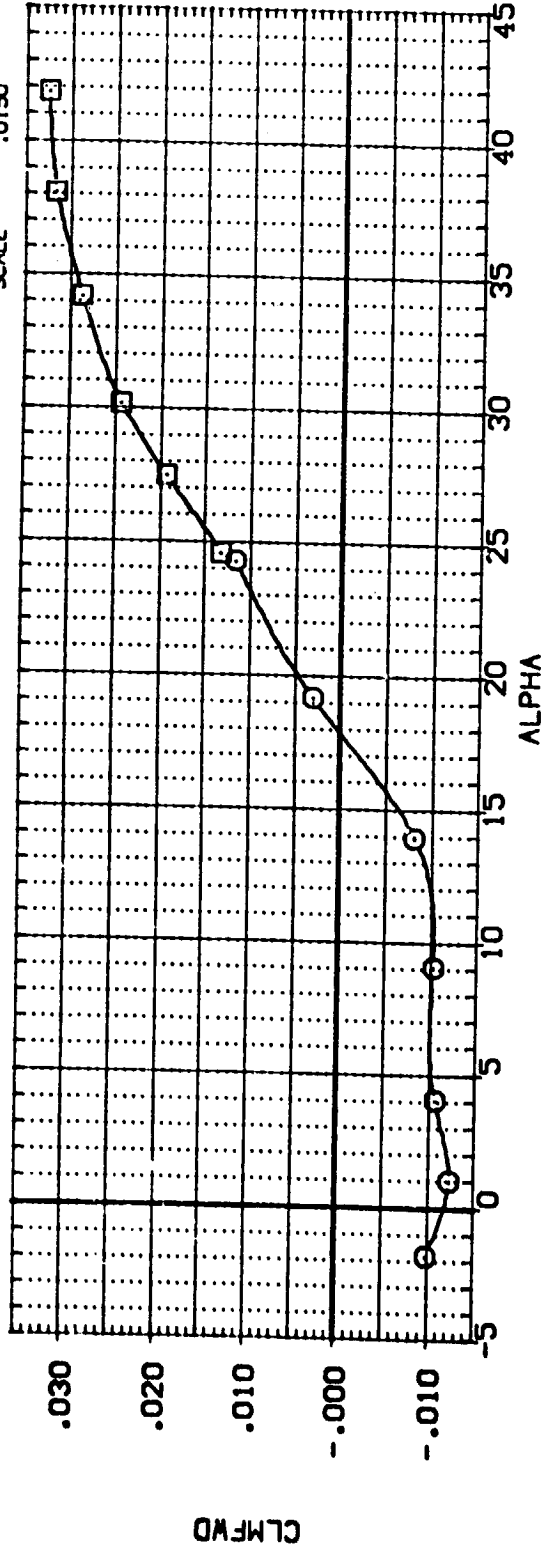


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION	
[880041]	AVES 3.5-160	0A11B (810F4C507G4B)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	SREF	2690.0000 SQ.FT.
[880040]	AVES 3.5-160	0A11B (810F4C507G4B)(V87E18)(V5RS)	-40.000	.000	54.920	-14.250	LREF	474.8100 IN.
							BREF	936.5800 IN.
							XMRP	1076.4800 IN.
							YMRP	400.0000 IN.
							ZMRP	400.0000 IN.
							SCALE	.0150

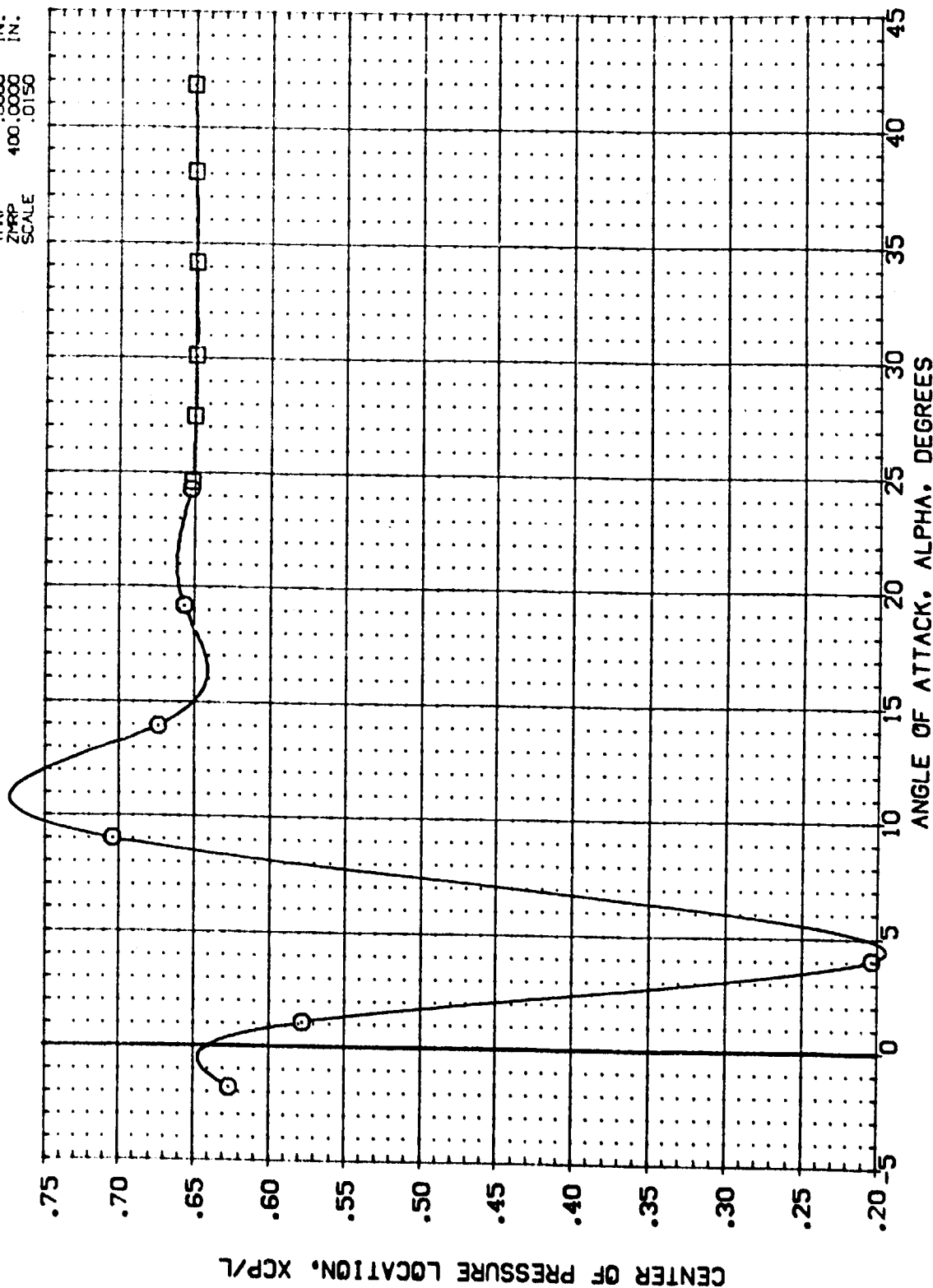


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(BB0041)
(BB0040)

AVES 3.5-160 CA118 (B10F4C507K3N8)(V87E18)(V5R5)
AVES 3.5-160 CA118 (B10F4C507K3N8)(V87E18)(V5R5)

ELEVON
-40.000
-40.000

RUDER
.000
.000

SPOBRK
54.920
54.920

BOLAP
-14.250
-14.250

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6600 IN.
XMRP 1076.4600 IN.
YMRP .0030 IN.
ZMRP 400.0000 IN.
SCALE .0150

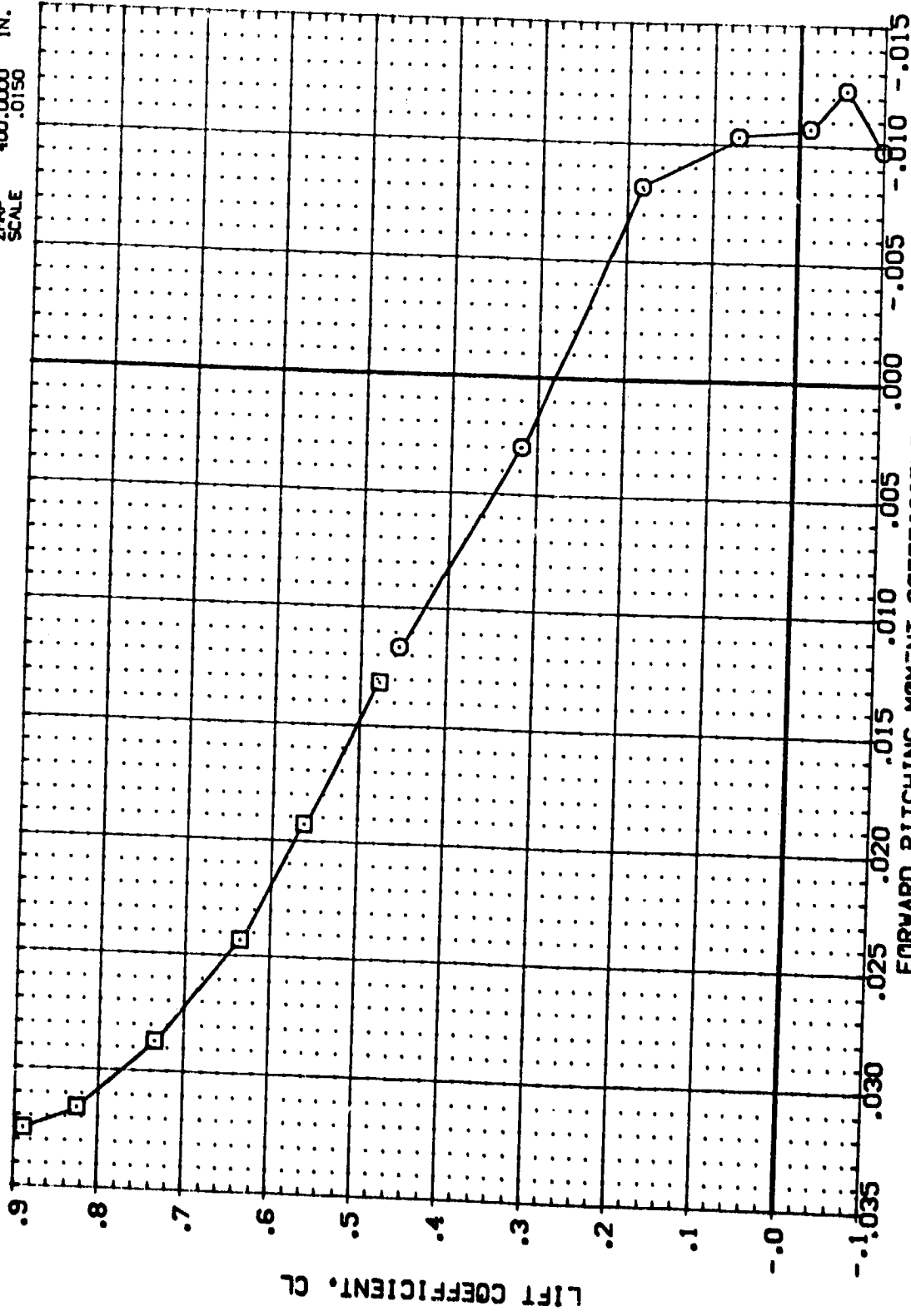


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS
(A)MACH = 10.29

DATA SET SYMBOL

(38X041)
(BBX040)

CONFIGURATION DESCRIPTION

AVES 3.5-160 DAI1B (B10F4C507H3N8)(V67E18)(V585)
AVES 3.5-160 DAI1B (B10F4C507H3N8)(V67E18)(V585)

ELEVON

-40.000
-40.000

RUDER

.000
.000

SPOILER

54.920
54.920

BOFLAP

-14.250
-14.250

REFERENCE INFORMATION

SREF 2690.0000 50. FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP 400.0000 IN.
SCALE .0150

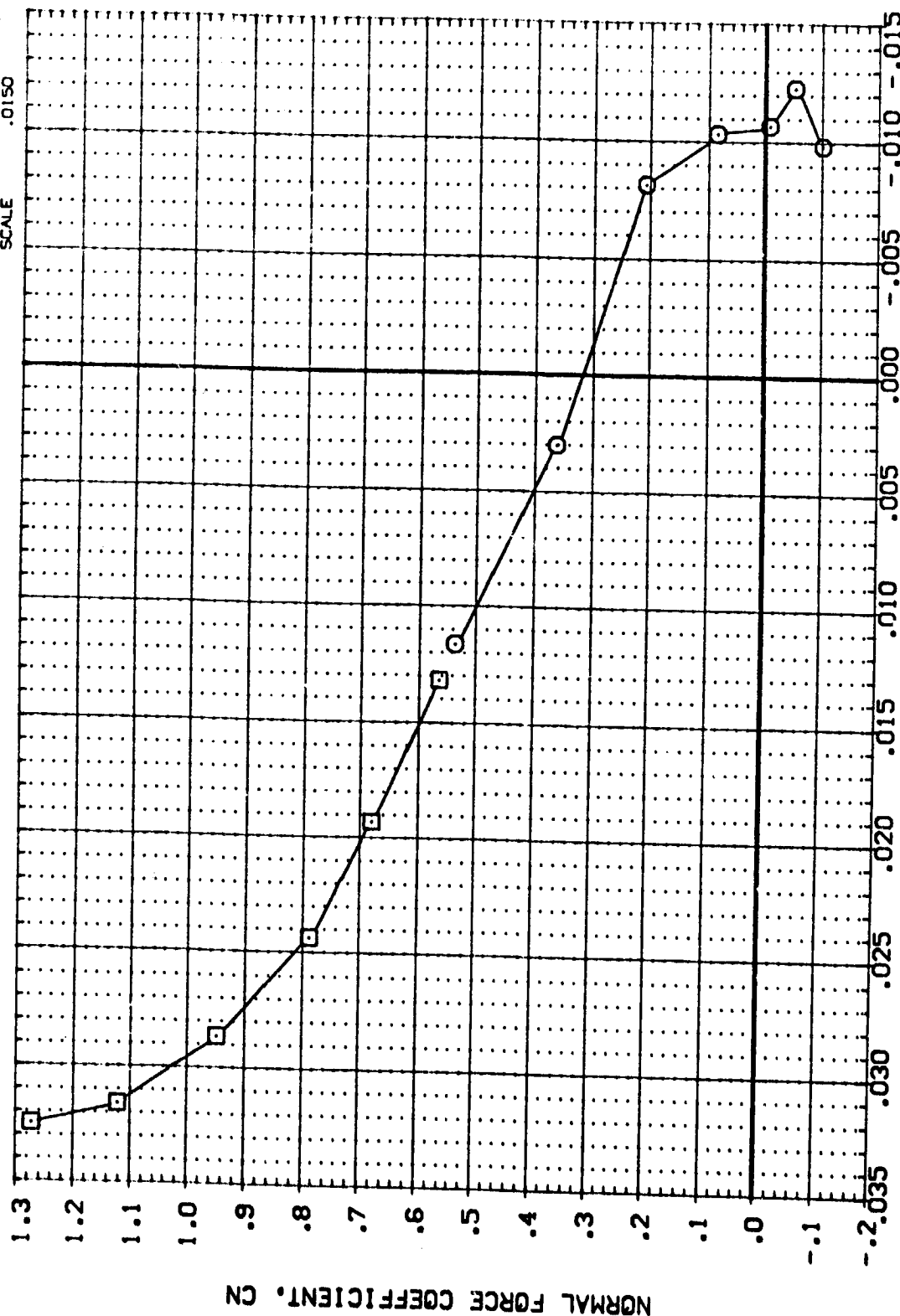



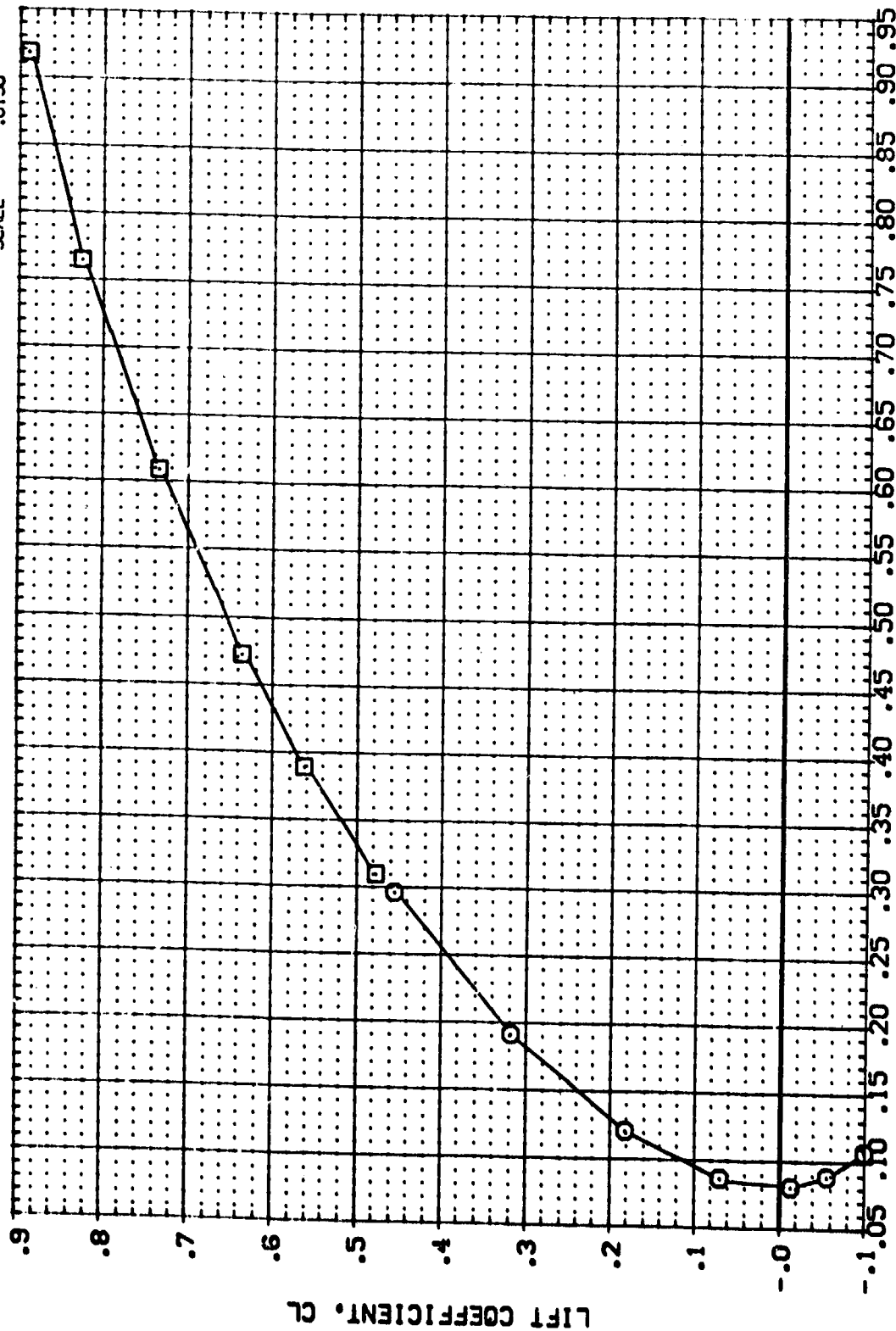
FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL: (BB0041) (BB0040)  CONFIGURATION DESCRIPTION: AVES 3.5-160 OA11B (B10F4C507M348)(V87E18)(V59R5) AVES 3.5-160 OA11B (B10F4C507M348)(V87E18)(V59R5)

ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
-40.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
-40.000	.000	54.920	-14.250	LREF 474.8100 IN.
				BREF 936.6800 IN.
				XMRP 1076.4800 IN.
				YMRP .0000 IN.
				ZMRP 400.0000 IN.
				SCALE .0150



DRAG COEFFICIENT, CD

FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(ABX041) □

AVES 3.5-160 OA11B (B10F4C507H3V8)(V87E18)(V5R5)

(ABX040) □

AVES 3.5-160 OA11B (B10F4C507H3V8)(V87E18)(V5R5)

ELEVON RUDDER SPOILER BOFLAP

.000 .000

54.920 54.920

-14.250 -14.250

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.9100 IN.

BREF 936.6800 IN.

XMRP 1076.4800 IN.

YMRP 400.0000 IN.

ZMRP 400.0000 IN.

SCALE .0150

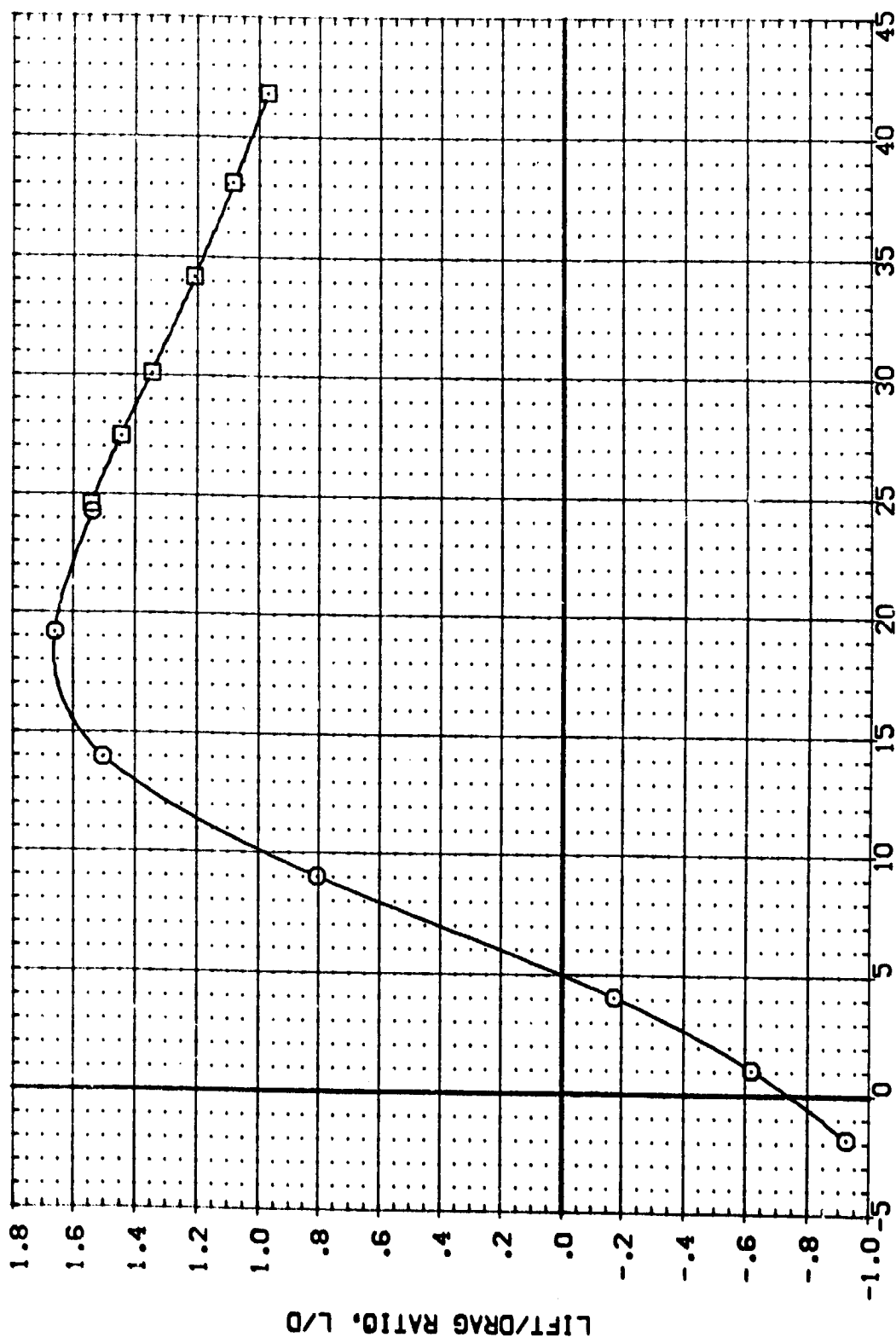


FIG. 2.B.3 MACH 10.29 -40 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL: (BBX055) (BBX049)  CONFIGURATION DESCRIPTION: AYES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V595) AYES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V595)

REFERENCE INFORMATION	
SREF	2630.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6200 IN.
XMRP	1076.4800 IN.
ZMRP	400.0000 IN.
SCALE	.0150

ELEVON: 10.000 RUDDER: .000 SPOBRK: 54.920 54.920 BOFLAP: 13.750 13.750

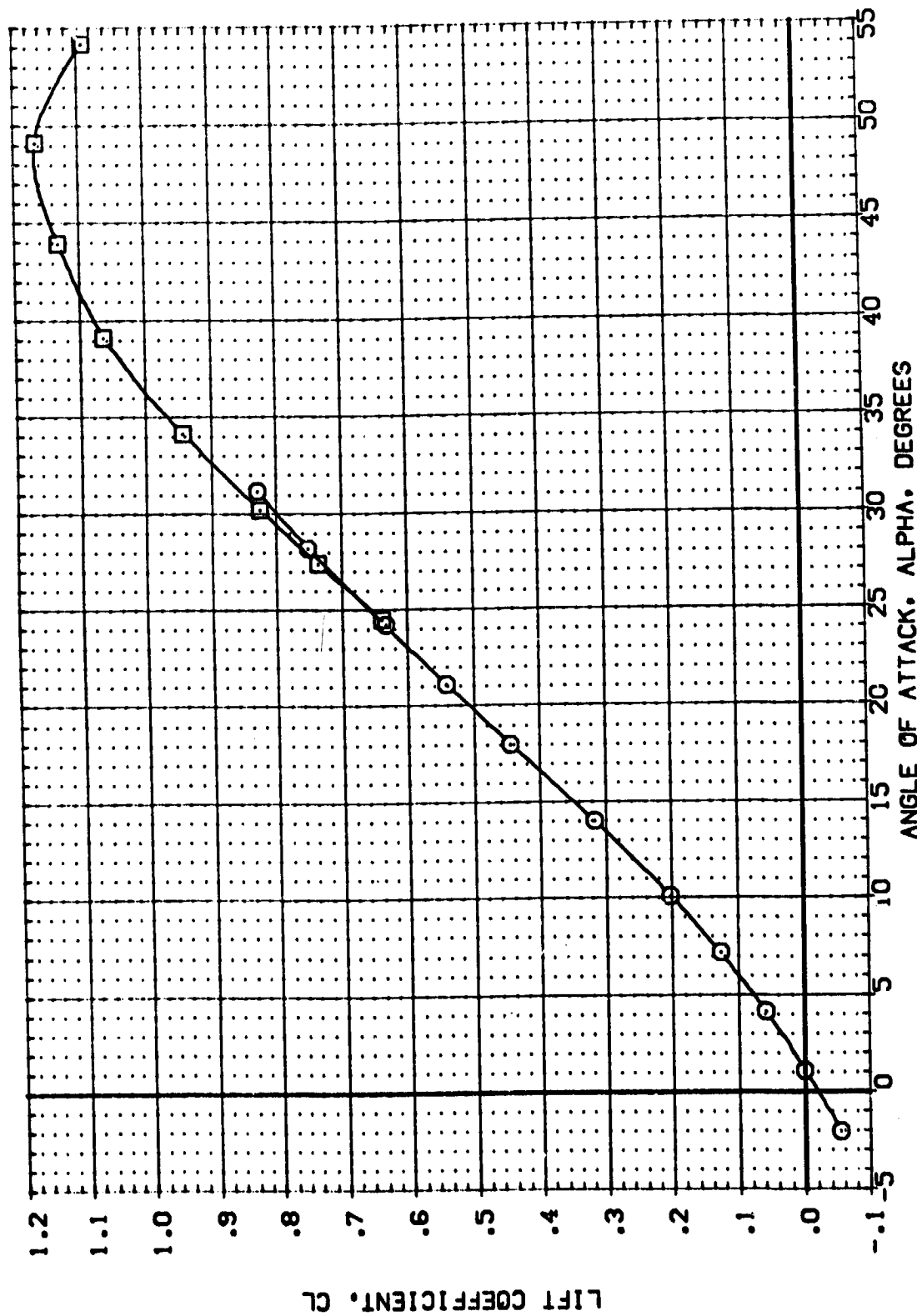


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS
(A)MACH = 5.26

DATA SET SYMBOL: (BBX049)
 CONFIGURATION DESCRIPTION: AVE 3.5-160 OA11B (B10F4CSD7M3-8)(V87E18)(V5K5)
 AVE 3.5-160 OA11B (B10F4CSD7M3-8)(V87E18)(V5K5)

ELEVON RUDDER SPOILER BDF LAP REFERENCE INFORMATION
 10.000 .000 54.920 13.750 SREF 2690.0000 52. FT.
 10.000 .000 54.920 13.750 LREF 474.8100 IN.
 XMRP 936.6800 IN.
 YMRP 1076.4800 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

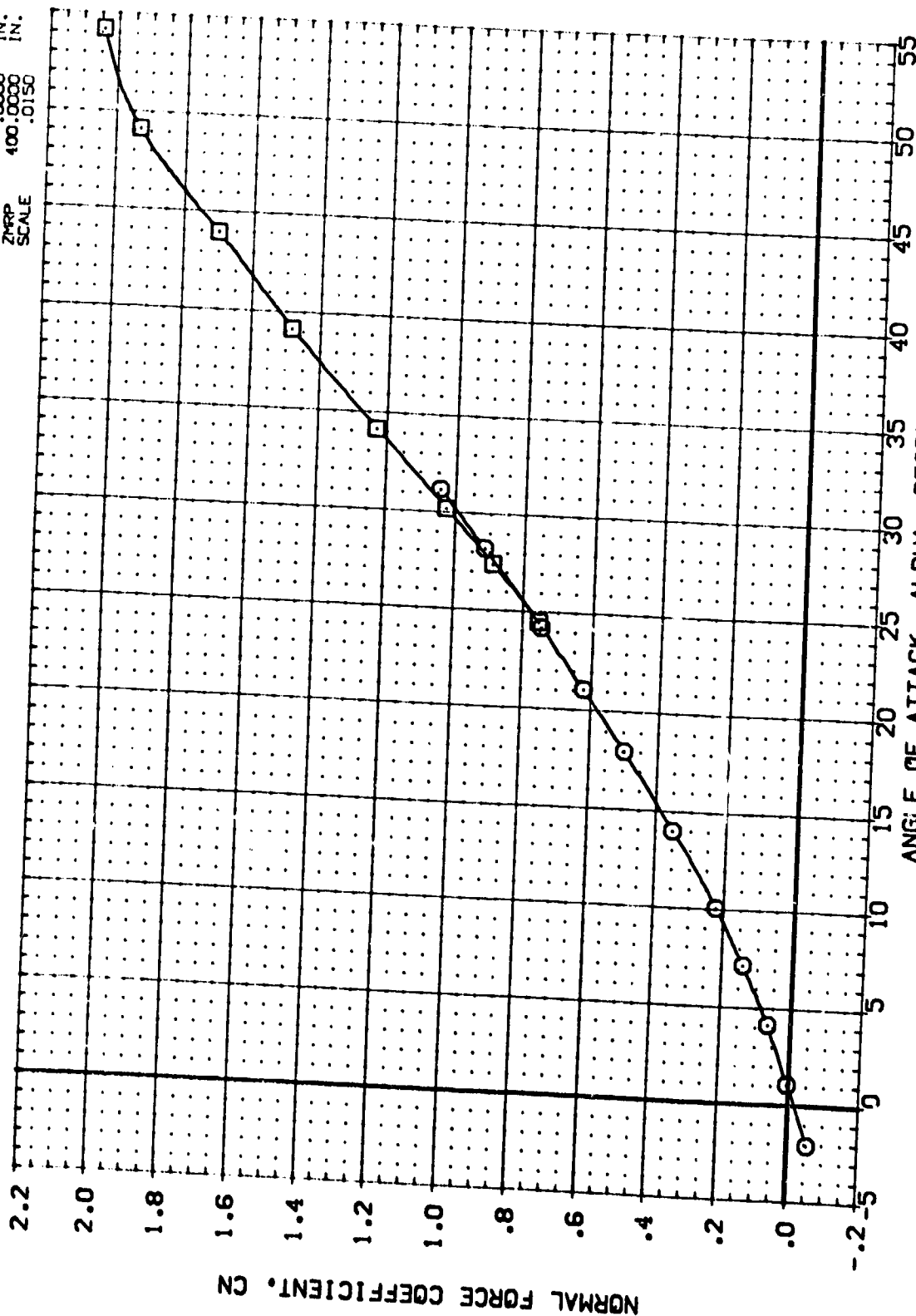


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS
 (A) MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SP08RK	BOFLAP	REFERENCE INFORMATION
(BBX063)	APES 3.5-160 DALLB (BIDF4C507M3N8)(V87E18)(V585)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BBX049)	APES 3.5-160 DALLB (BIDF4C507M3N8)(V87E18)(V585)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
						SREF 936.6900 IN.
						XTRP 1076.4800 IN.
						YTRP 400.0000 IN.
						ZTRP 400.0000 IN.
						SCALE .0150

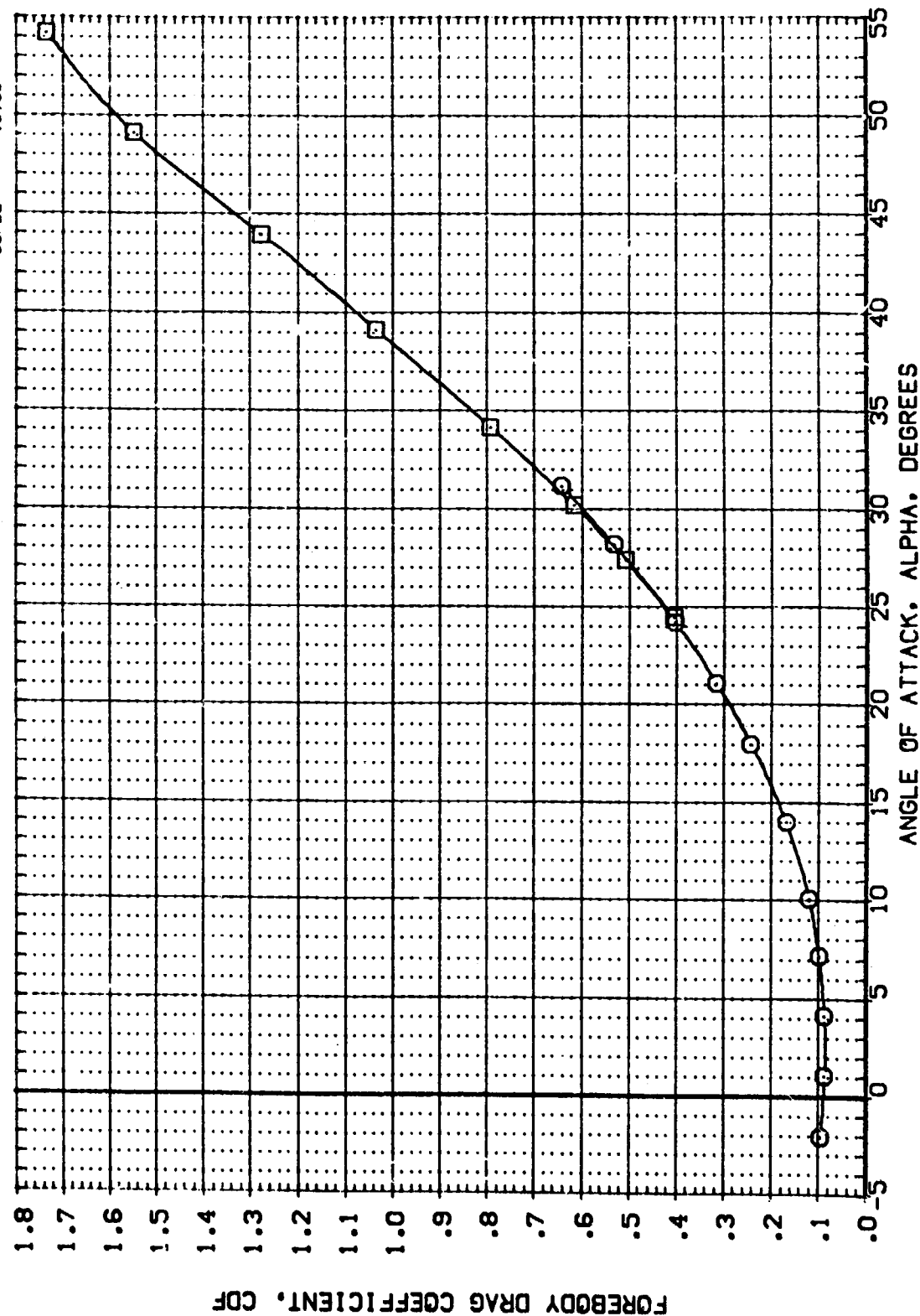


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPDBRK		BOFLAP		REFERENCE INFORMATION	
(88X055)	□	AVES 3.5-160	CA11B (B10F4C507H3N8)(V87E18)(V5H85)	10.000	.000	54.920	13.750	SREF	2690.0000	50.000	50.000		
(88X049)		AVES 3.5-160	CA11B (B10F4C507H3N8)(V87E18)(V5H85)	10.000	.000	54.920	13.750	LREF	474.8100	IN.	IN.		
								BREF	936.5800	IN.	IN.		
								XMRP	1076.4800	IN.	IN.		
								ZMRP	100.0000	IN.	IN.		
								SCALE	.0150				

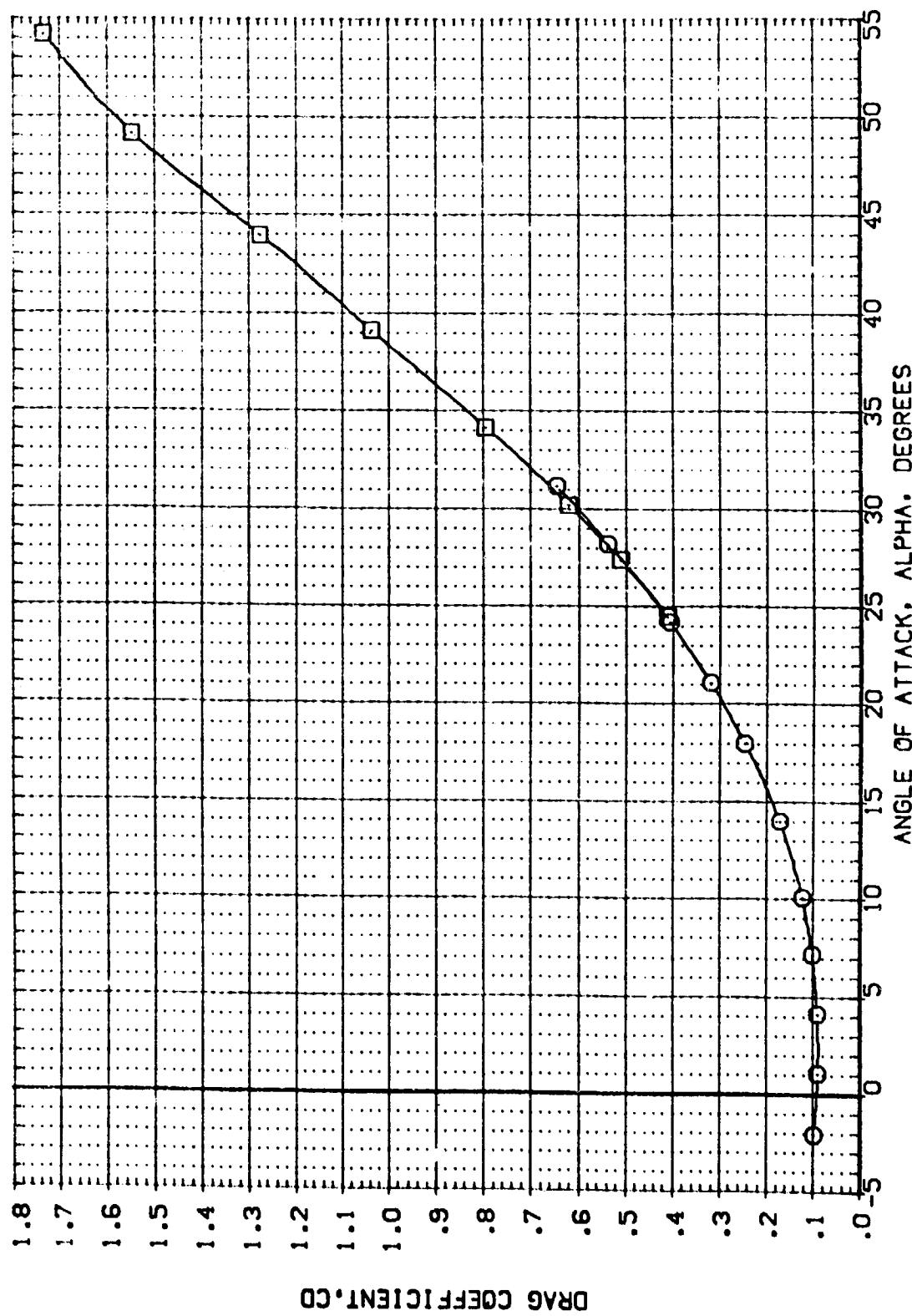




FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS
(A)MACH = 5.26



DATA SET SYMBOL: (BBX055) (BBX049)  

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 DAI1B (B10F4C507N3-8)(V87E18)(V59S)
 AYES 3.5-160 DAI1B (B10F4C507N3-8)(V87E18)(V59S)

ELEVON RUDDER SPOBRK BOFLAP
 10.000 .000 54.920 13.750
 10.000 .000 54.920 13.750

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 YMRP 1076.4800 IN.
 ZMRP .0000 IN.
 SCALE 400.0000 IN.
 .0150

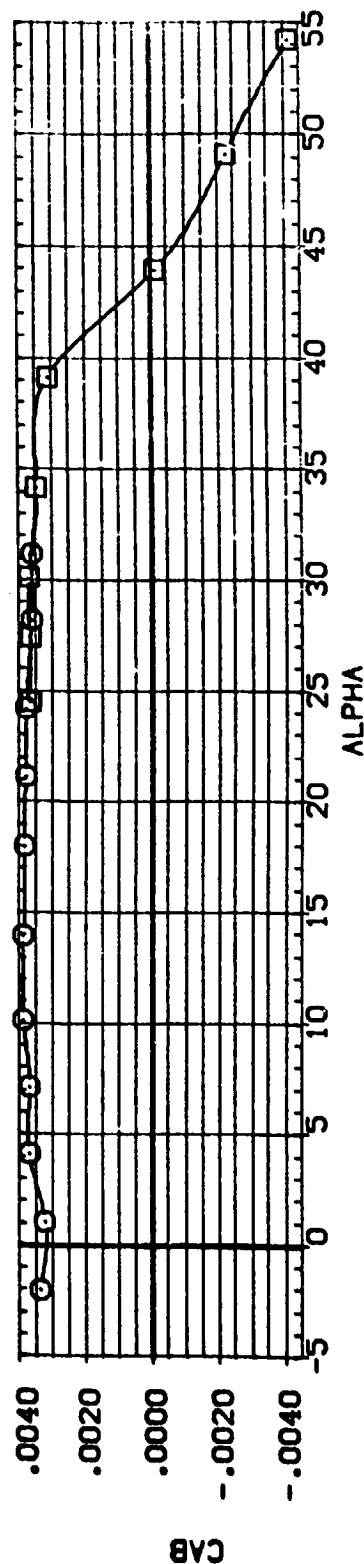
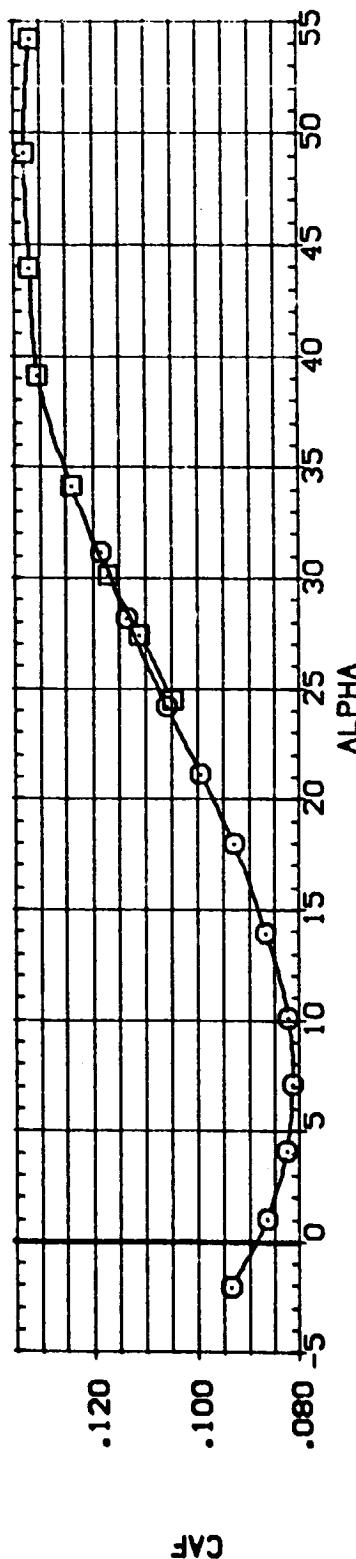
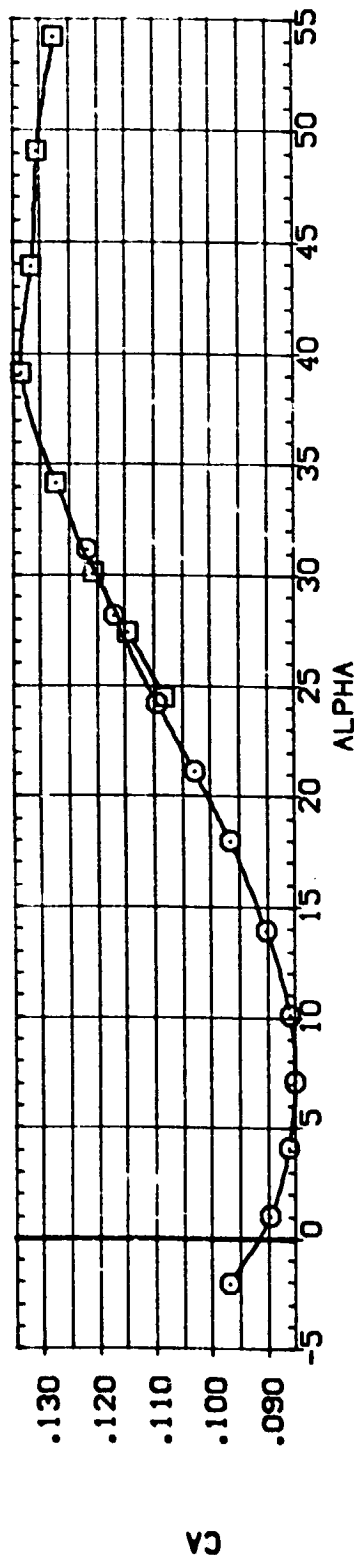


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPOORX		BOFLAP		REFERENCE INFORMATION	
{BBX065}		AMES 3.5-160 DA11B (B10FAC507M308)(V87E18)(V8RS)		{0.000}		{0.000}		54.920		13.750		SREF 2613.0000 SQ.FT.	
{BBX049}		AMES 3.5-160 DA11B (B10FAC507M308)(V87E18)(V8RS)		{0.000}		{0.000}		54.920		13.750		LREF 474.8100 IN.	
				{0.000}		{0.000}						BREF 936.6800 IN.	
				{0.000}		{0.000}						XMRP 1076.4900 IN.	
				{0.000}		{0.000}						YMRP 0.0000 IN.	
				{0.000}		{0.000}						ZMRP 400.0000 IN.	
				{0.000}		{0.000}						SCALE .0150	

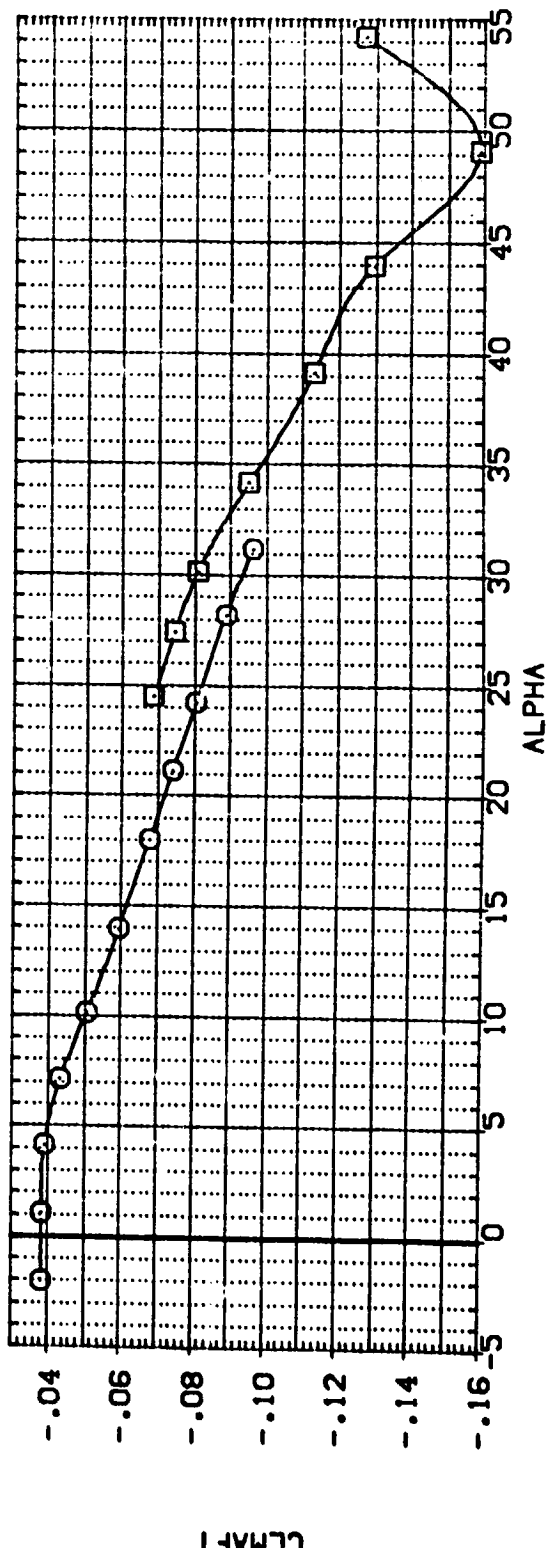
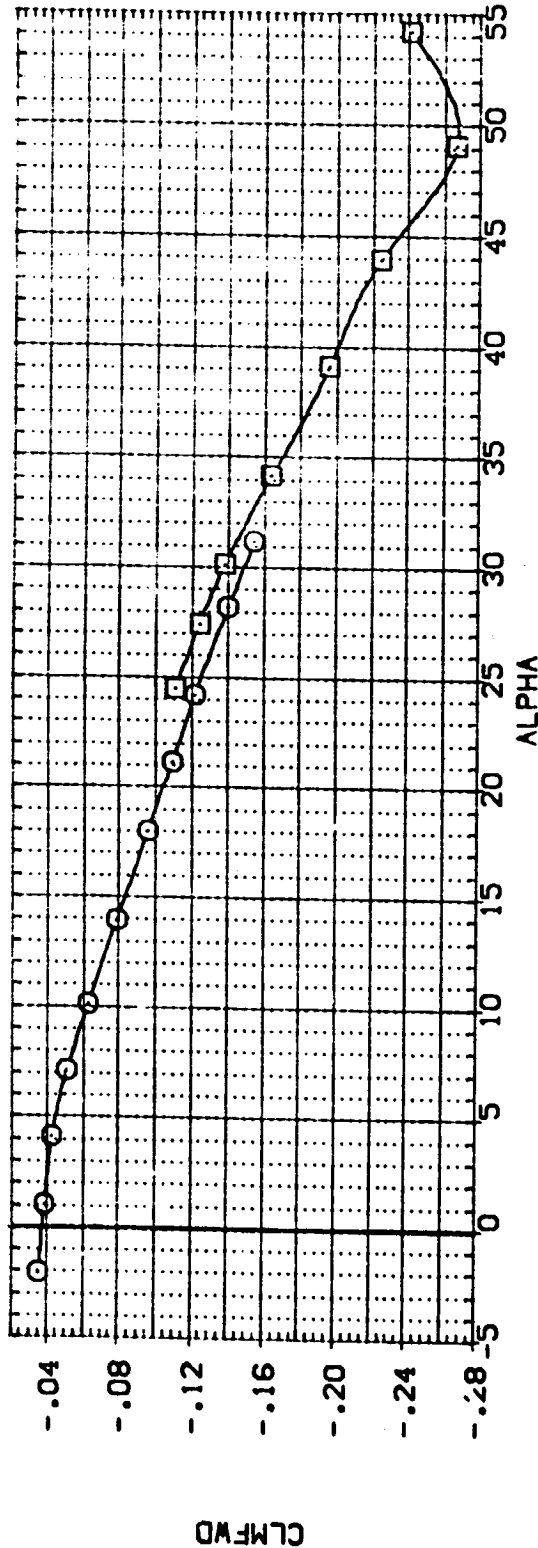


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOBRK	BDCLAP	REFERENCE INFORMATION
(B8X065)	AMES 3.5-160 0A11B (B10F4C507G08)(V87E18)(V5R5)	10.000	.000	54.920	13.750	SREF 2697.0000 SQ.FT.
(B8X049)	AMES 3.5-160 0A11B (B10F4C507G08)(V87E18)(V5R5)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XTRP 1076.1800 IN.
						YTRP .0000 IN.
						ZTRP 400.0000 IN.
						SCALE .0150

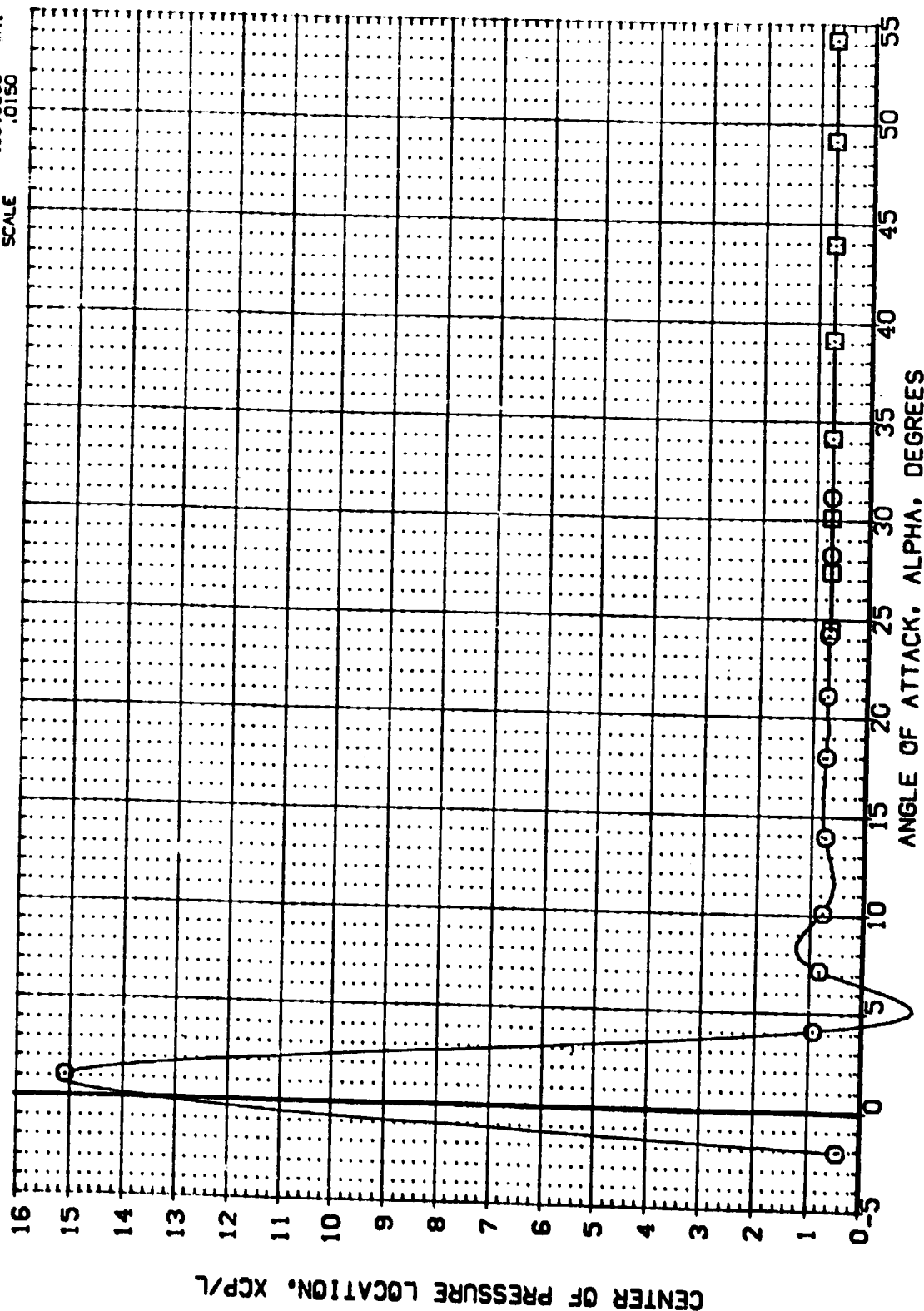


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL (88X065) (88X049)

CONFIGURATION DESCRIPTION
 ASES 3.5-160 DA118 (81DF4C507H3-8)
 ASES 3.5-160 DA118 (81DF4C507H3-8)

ELEVON RUDDER SPDRK BOFLAP
 10.000 .000 54.920 13.750
 10.000 .000 54.920 13.750

REFERENCE INFORMATION
 SREF 2590.0000 SQ.FT.
 LREF 474.9100 IN.
 BREF 936.6200 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP .0000 IN.
 SCALE 400.0000
 .0150

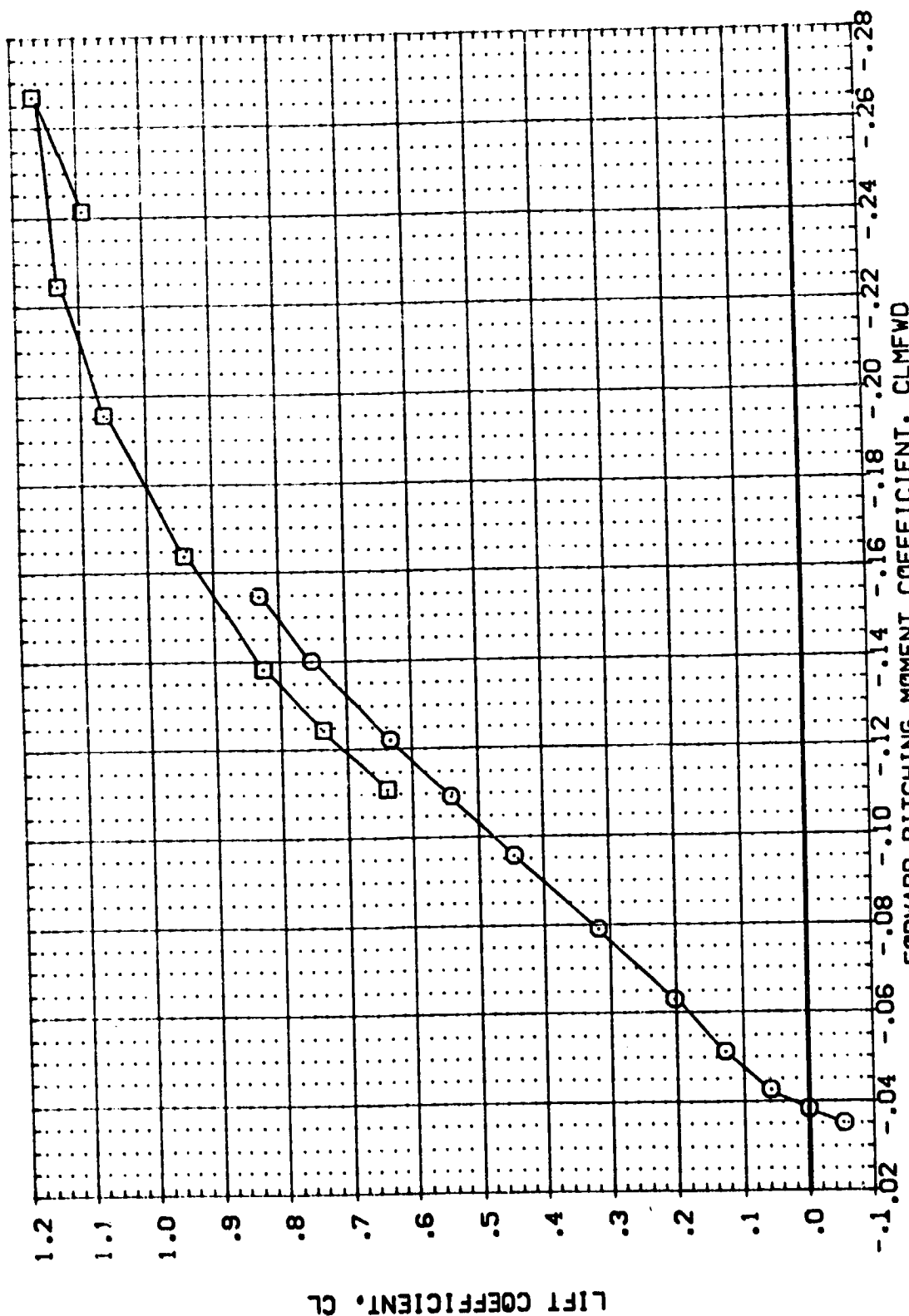


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (BBX055) (BBX049) 9
 CONFIGURATION DESCRIPTION: AMES 3.5-160 CA118 (B10F4C507KGN8)(V87E18)(VSR5) AMES 3.5-160 CA118 (B10F4C507KGN8)(V87E18)(VSR5)
 REFERENCE INFORMATION: SREF 2690.0000 50. FT. LREF 474.8100 IN. BREF 936.6800 IN. XMRP 1076.4800 IN. YMRP 0.000 IN. ZMRP 400.0000 IN. SCALE .0150

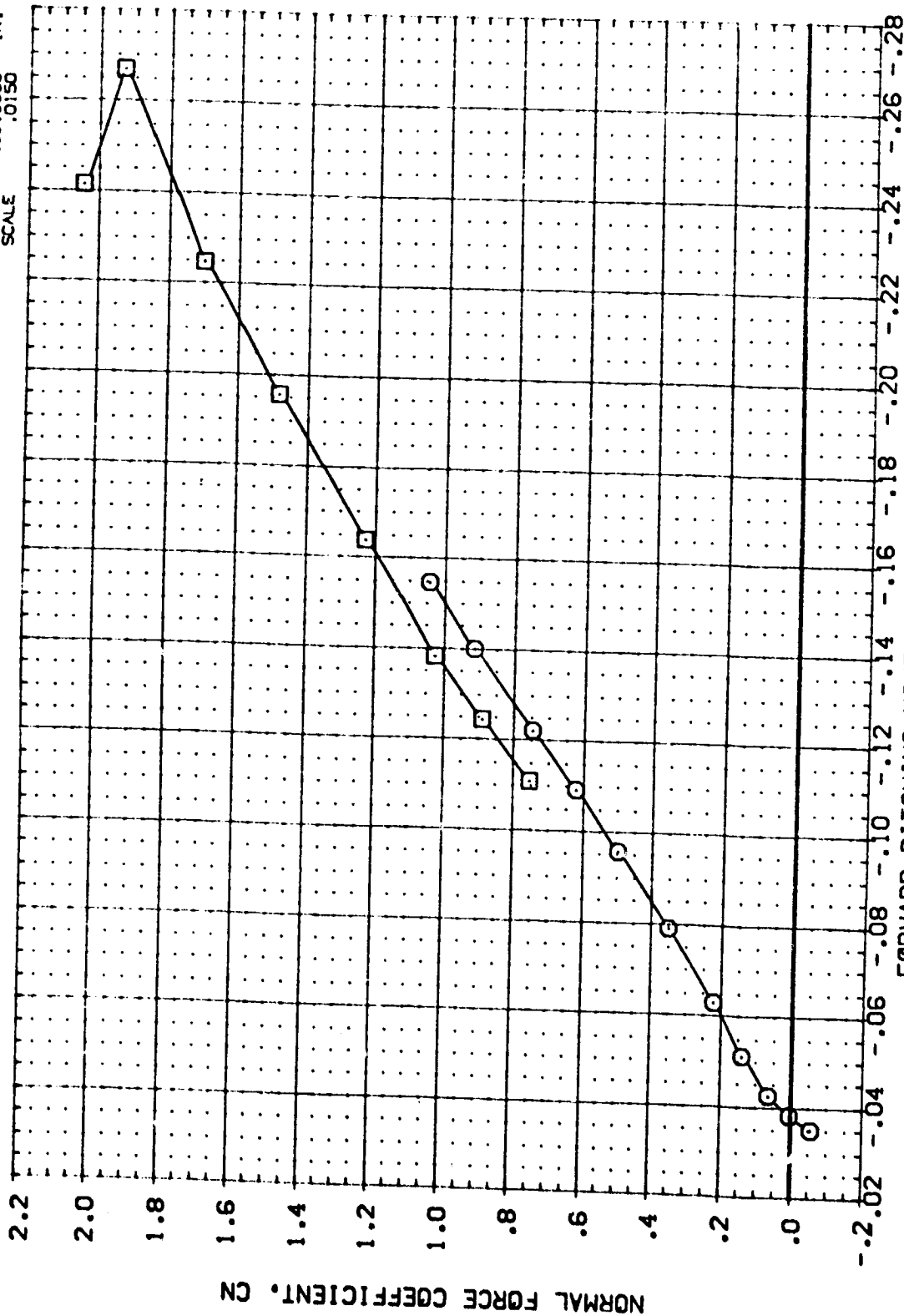


FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(B0X065)	AVES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V5R5)	SREF 2590.0000	SQ.FT.
(B0X049)	AVES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V5R5)	LREF 474.6100	IN.
		BREF 936.6800	IN.
		XMRP 1076.4800	IN.
		ZMRP .0000	IN.
		SCALE 400.0000	IN.
			.C150

BOE LIP SPDRK RUDDER ELEVON

13.750	54.920	.000	10.000
13.750	54.920	.000	10.000

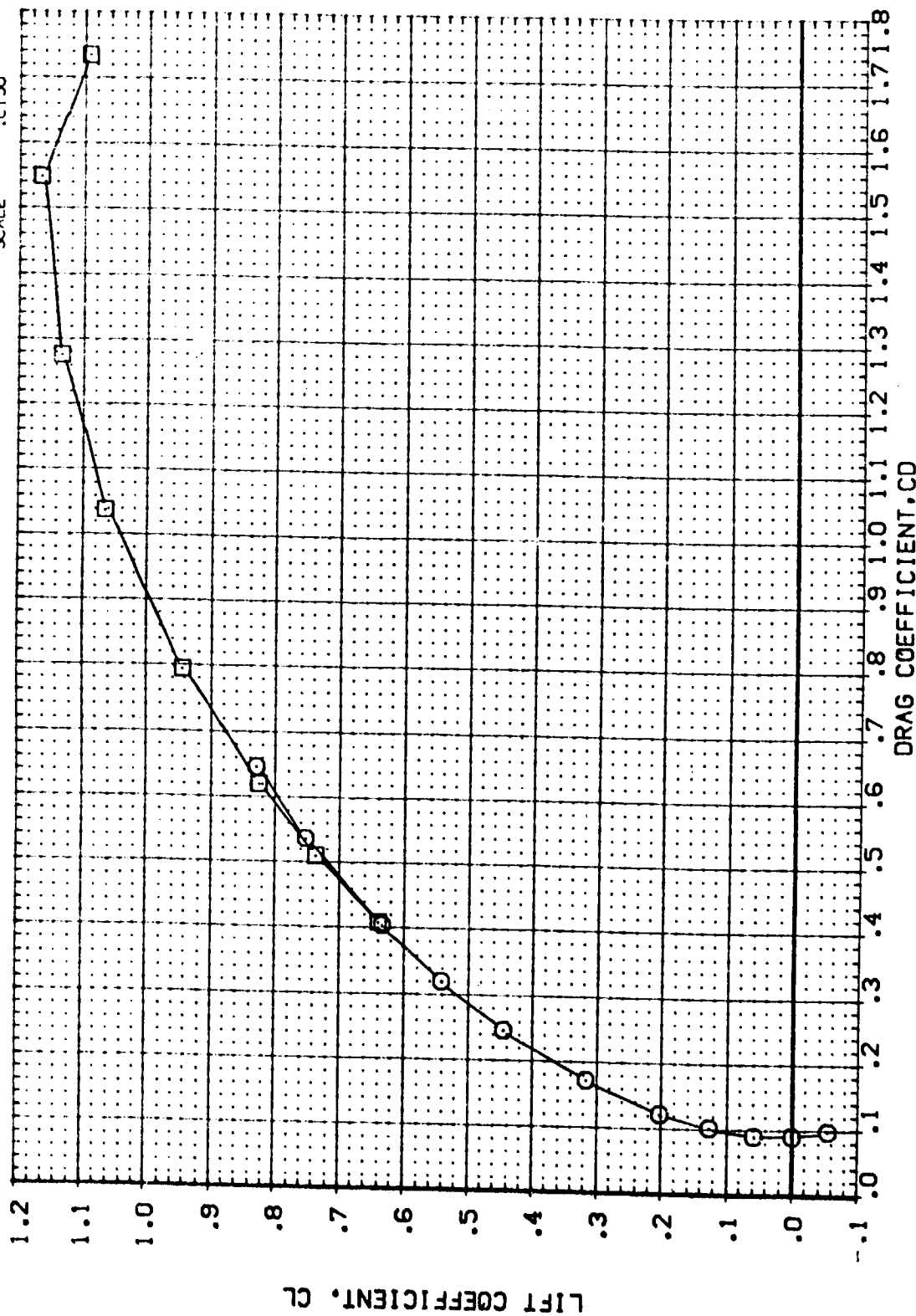


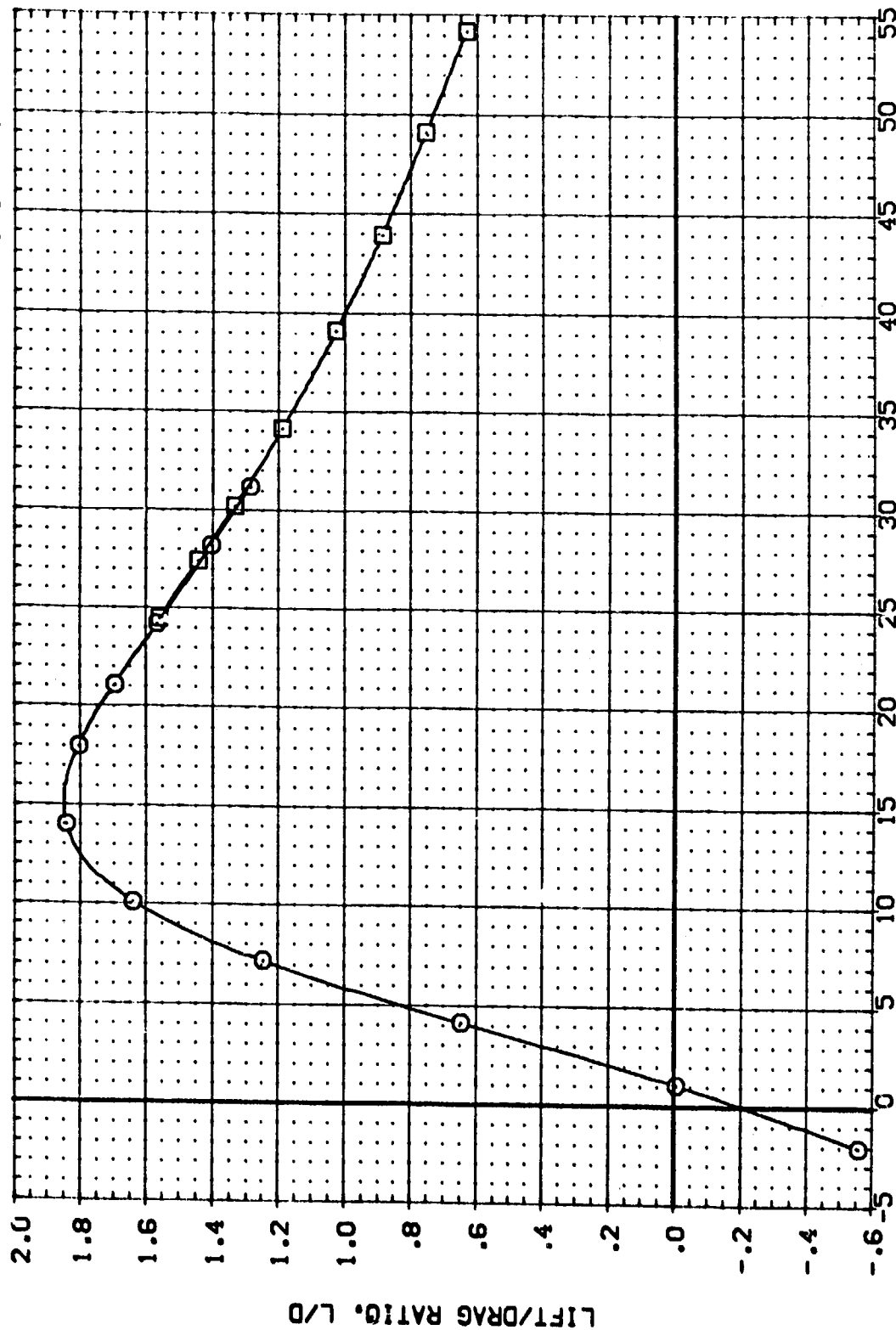
FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

CAJ MACH = 5.26



DATA SET SYMBOL CONFIGURATION DESCRIPTION ELEVON RUDDER SPDBRK BDFLAP REFERENCE INFORMATION

(ABX065)	(ABX049)	AVES 3.5-160 CA11B (B10F4C5D7K3N8)(V87E18)(V5R5)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
		AVES 3.5-160 CA11B (B10F4C5D7K3N8)(V87E18)(V5R5)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
							BREF 936.6800 IN.
							XMRP 1076.4800 IN.
							YMRP 400.0000 IN.
							ZMRP 400.0000 IN.
							SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 2.C.1 MACH 5.26, 10 DEGREE ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRM	BOFLAP	REFERENCE INFORMATION
(880011)	AVES 3.5-160 DA11B (810F4C507M3-8) (V87E18) (V59S)	10.000	.000	54.820	13.750	SREF 2650.0000 50. FT.
(880012)	AVES 3.5-160 DA11B (810F4C507M3-8) (V87E18) (V59S)	10.000	.000	54.820	13.750	LREF 474.8100 IN.
(880034)	AVES 3.5-160 DA11B (810F4C507M3-8) (V87E18) (V59S)	10.000	.000	54.820	13.750	BREF 353.6800 IN.
						YPRP 1076.4800 IN.
						ZPRP .0000 IN.
						SCALE 400.0000
						.0150

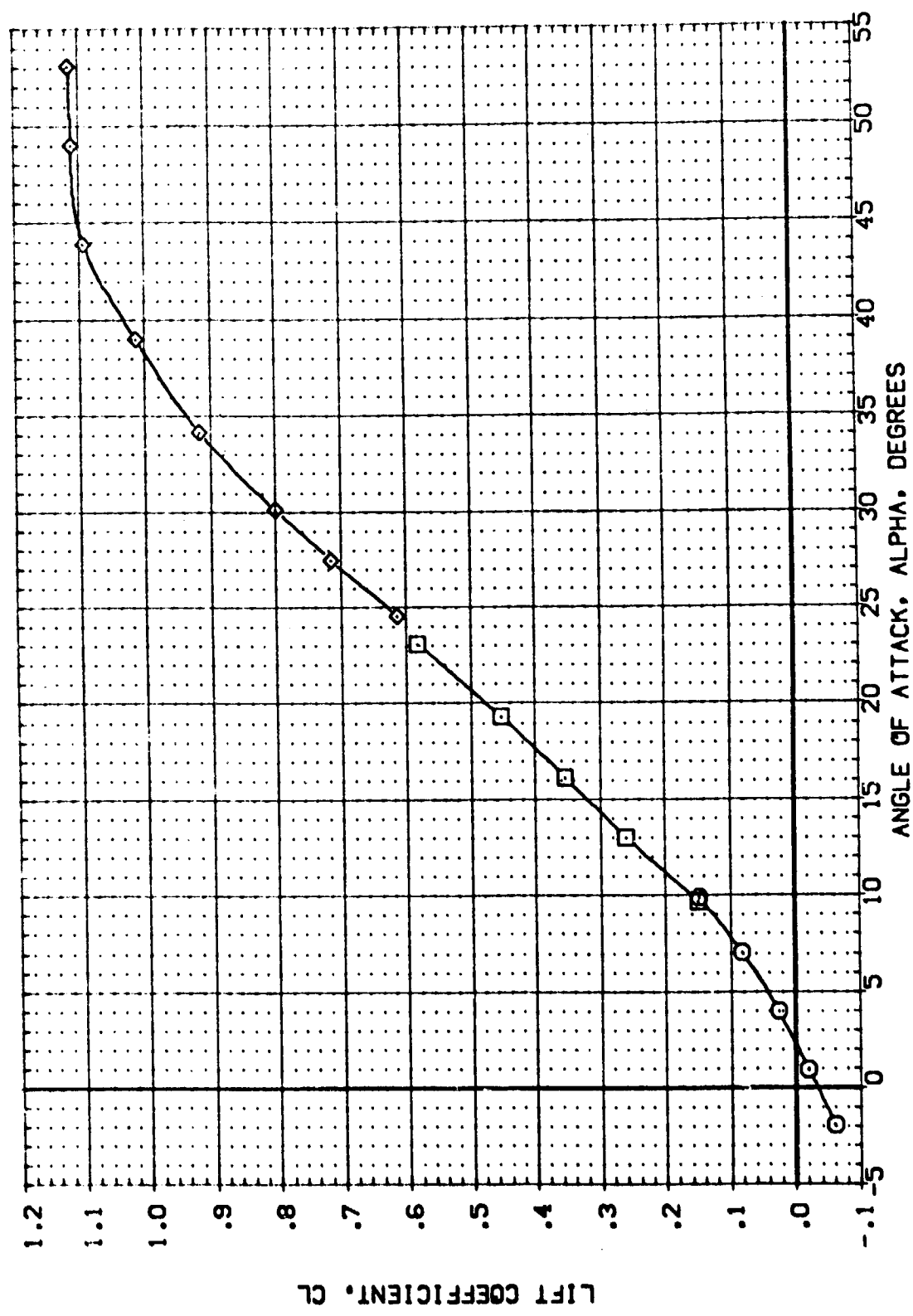


FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRBK	BDFLAP	REFERENCE INFORMATION
(880011)	AVES 3.5-160 CA11B (810F4C507K3B)(V87E18)(V5R5)	10.000	.000	54.920	13.750	SREF 2650.0000 SQ.FT.
(880012)	AVES 3.5-160 CA11B (810F4C507K3B)(V87E18)(V5R5)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
(880034)	AVES 3.5-160 CA11B (810F4C507K3B)(V87E18)(V5R5)	10.000	.000	54.920	13.750	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

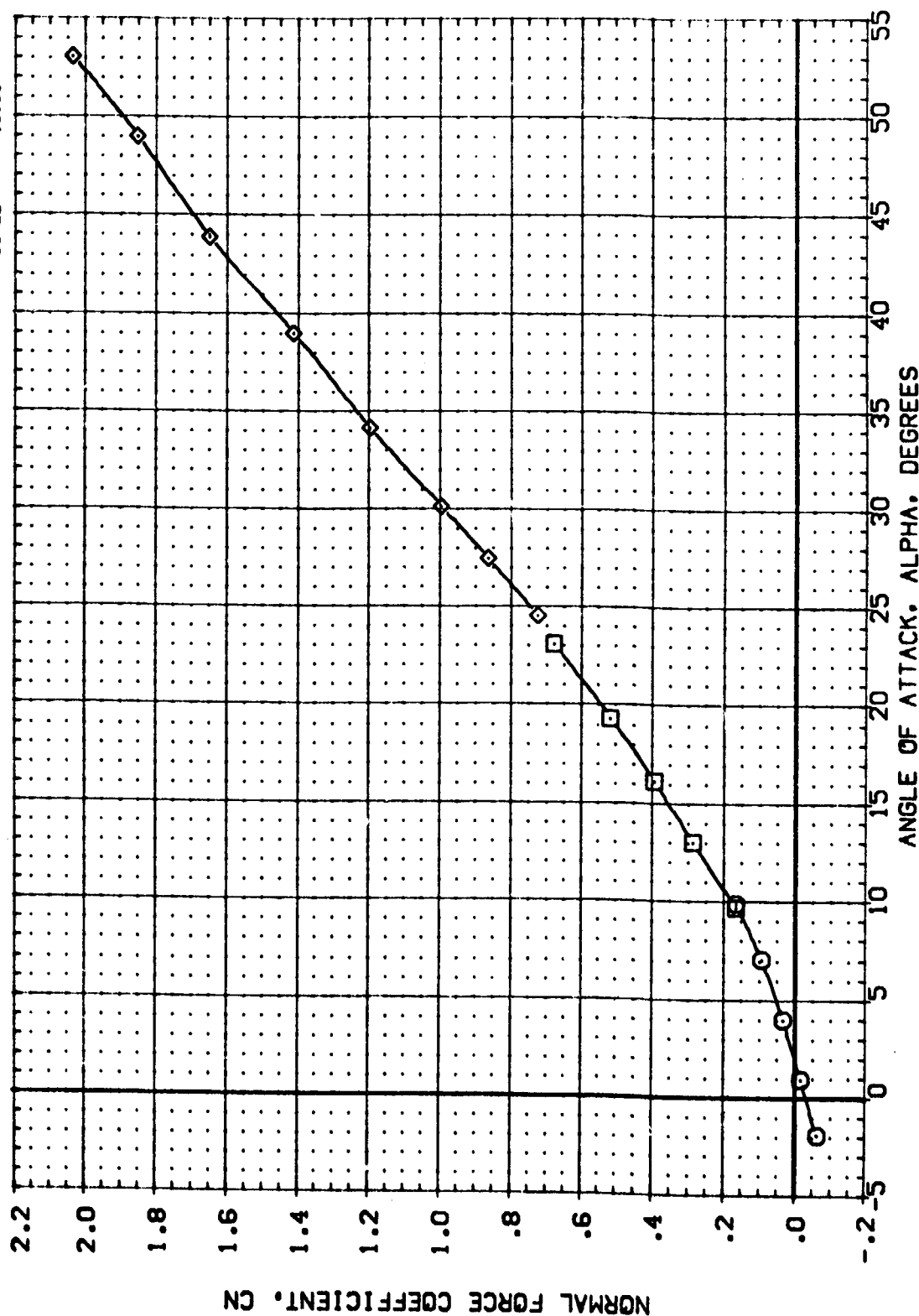


FIG. 2.C.2 MACH 7.32. 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION	SO.FT.
(88X011)	AVES 3.5-160 CA11B (810F4C507H3N8)(V87E18)(V5K5)	10.000	.000	54.920	13.750	SREF 2690.0000	N.
(88X012)	AVES 3.5-160 CA11B (810F4C507H3N8)(V87E18)(V5K5)	10.000	.000	54.920	13.750	LREF 474.8100	N.
(88X034)	AVES 3.5-160 CA11B (810F4C507H3N8)(V87E18)(V5K5)	10.000	.000	54.920	13.750	BREF 936.6800	N.
						XREF 1076.4800	N.
						YREF 400.0000	N.
						ZREF 400.0000	N.
						SCALE .0150	

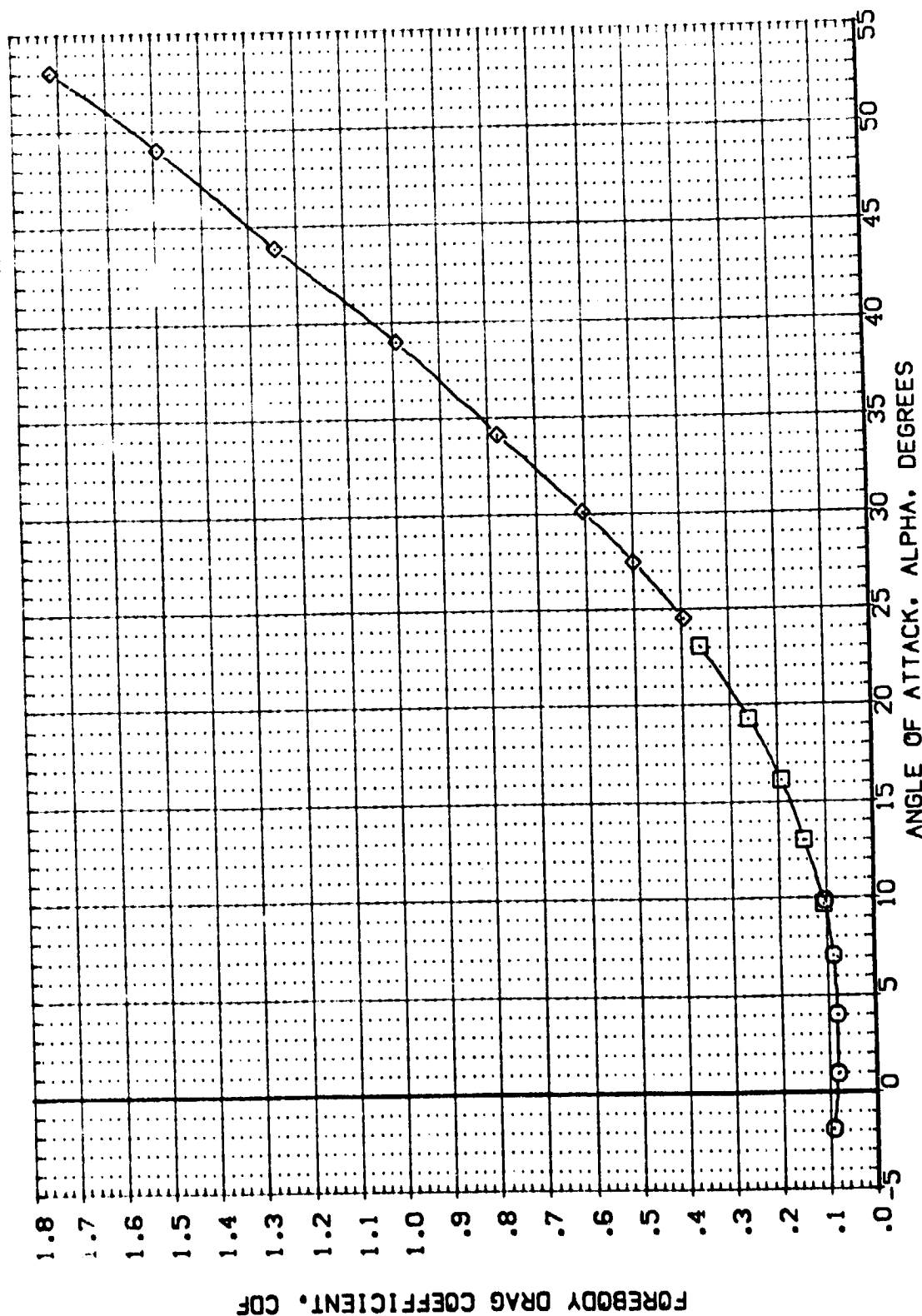


FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BBX011)	AMES 3.5-160 OA118 (810F4C507K3N8)(V87E18)(V5RS)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BBX012)	AMES 3.5-160 OA118 (810F4C507K3N8)(V87E18)(V5RS)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
(BBX034)	AMES 3.5-160 OA118 (810F4C507K3N8)(V87E18)(V5RS)	10.000	.000	54.920	13.750	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						VMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

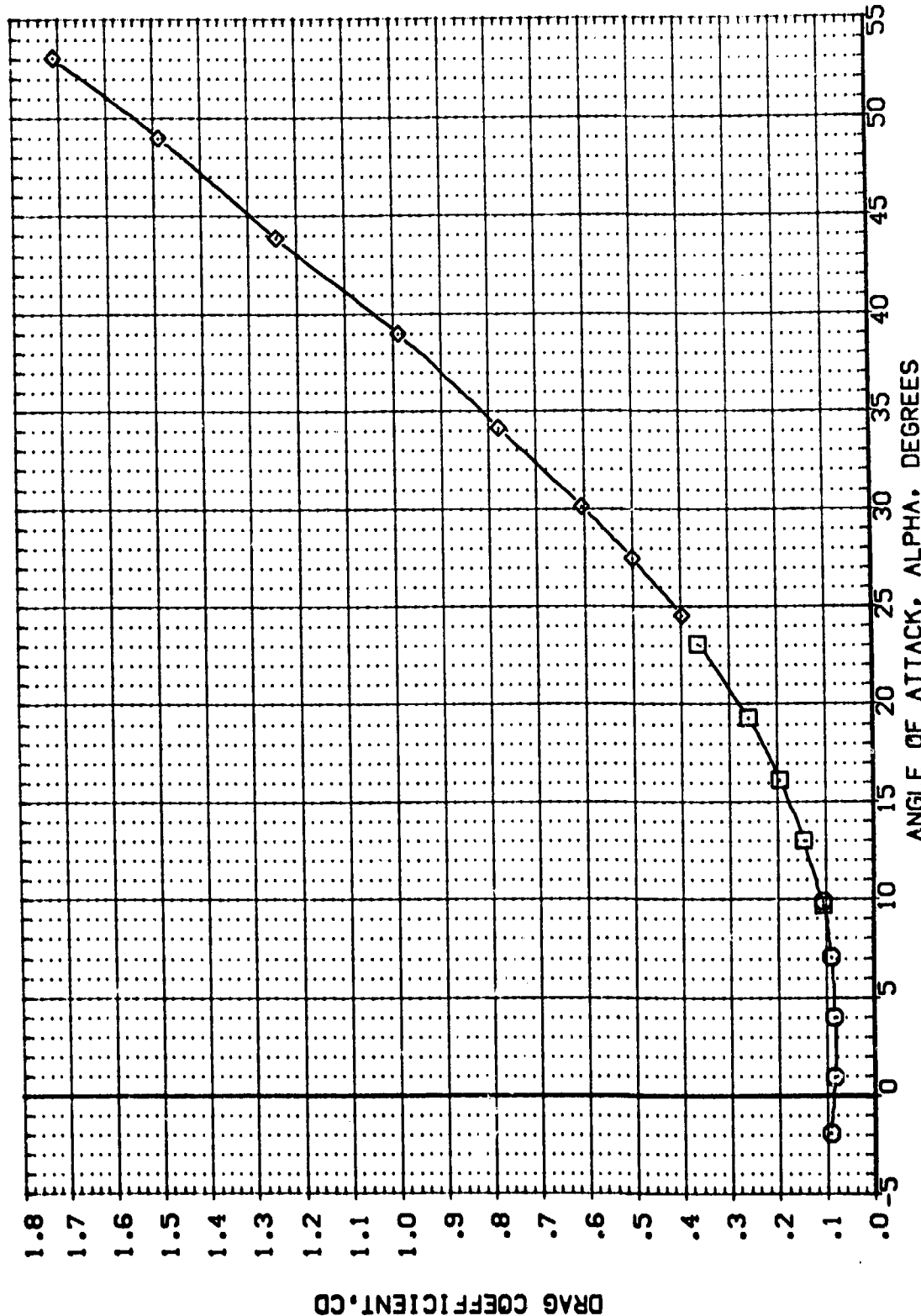


FIG. 2.C.2 MACH 7.32. 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL: CONFIGURATION DESCRIPTION: AVE 3.5-160 CA11B (810F4CSL7K3B) (V87E18) (V595) (88X011) AVE 3.5-160 CA11B (810F4CSL7K3B) (V87E18) (V595) (88X012) AVE 3.5-160 CA11B (810F4CSL7K3B) (V87E18) (V595) (88X034)

ELEVON RUDDER SPOILER BOFLAP REFERENCE INFORMATION SO.FT. SREF 2690.0000 IN. LREF 474.8100 IN. BREF 936.6800 IN. XMRP 1076.4800 IN. YMRP .0000 IN. ZMRP 400.0000 IN. SCALE .0150

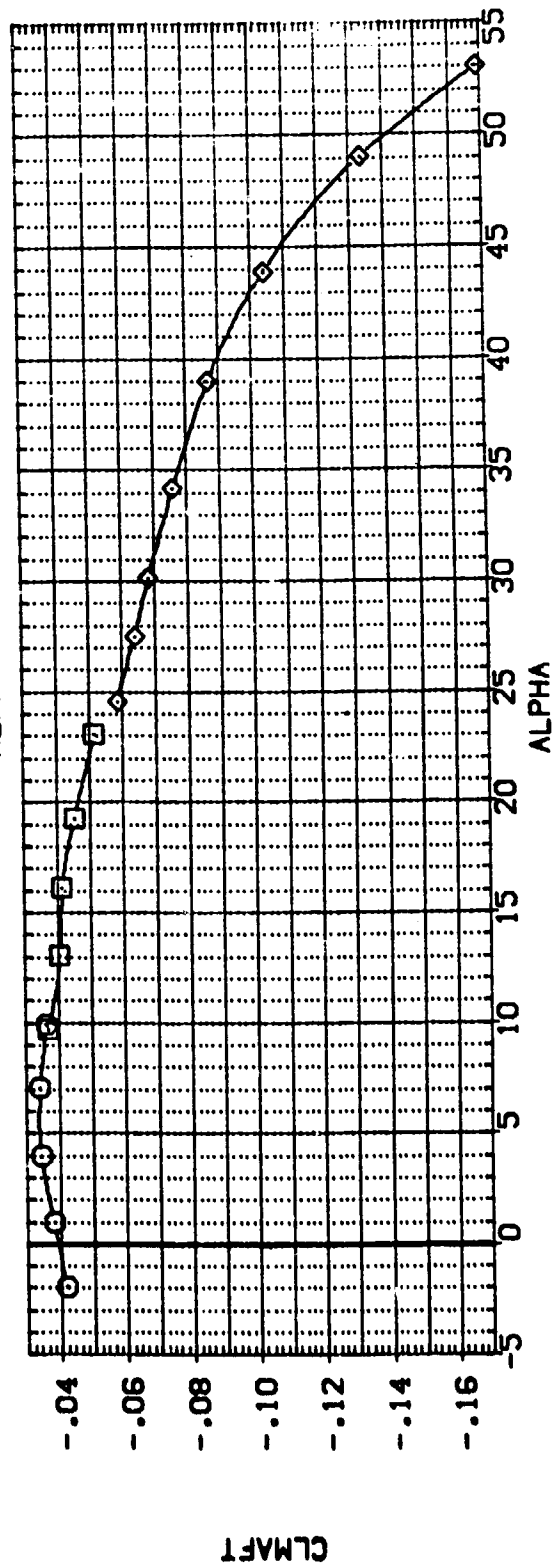
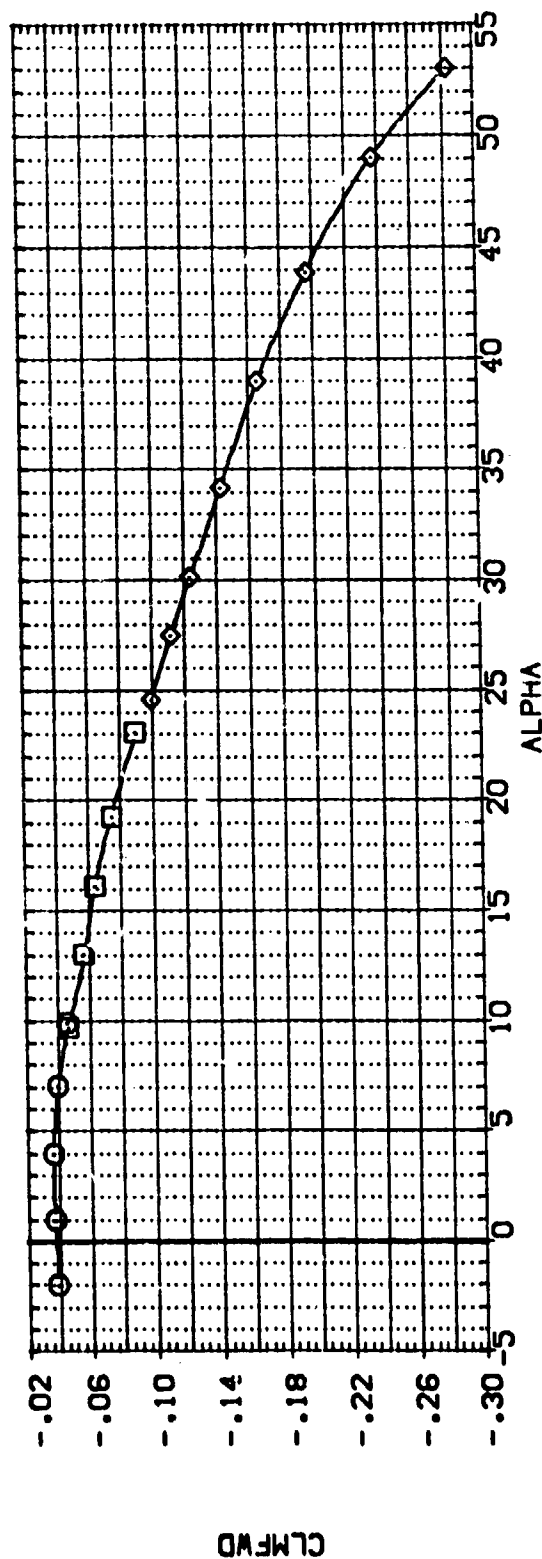


FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS
(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BBX011)	AVES 3.5-160 OA11B (B10F4C507H38)(V87E18)(V5RS)	10.000	.000	54.920	13.750	SREF 2690.0000 50. FT.
(BBX012)	AVES 3.5-160 OA11B (B10F4C507H38)(V87E18)(V5RS)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
(BBX034)	AVES 3.5-160 OA11B (B10F4C507H38)(V87E18)(V5RS)	10.000	.000	54.920	13.750	BREF 936.8800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE 0150

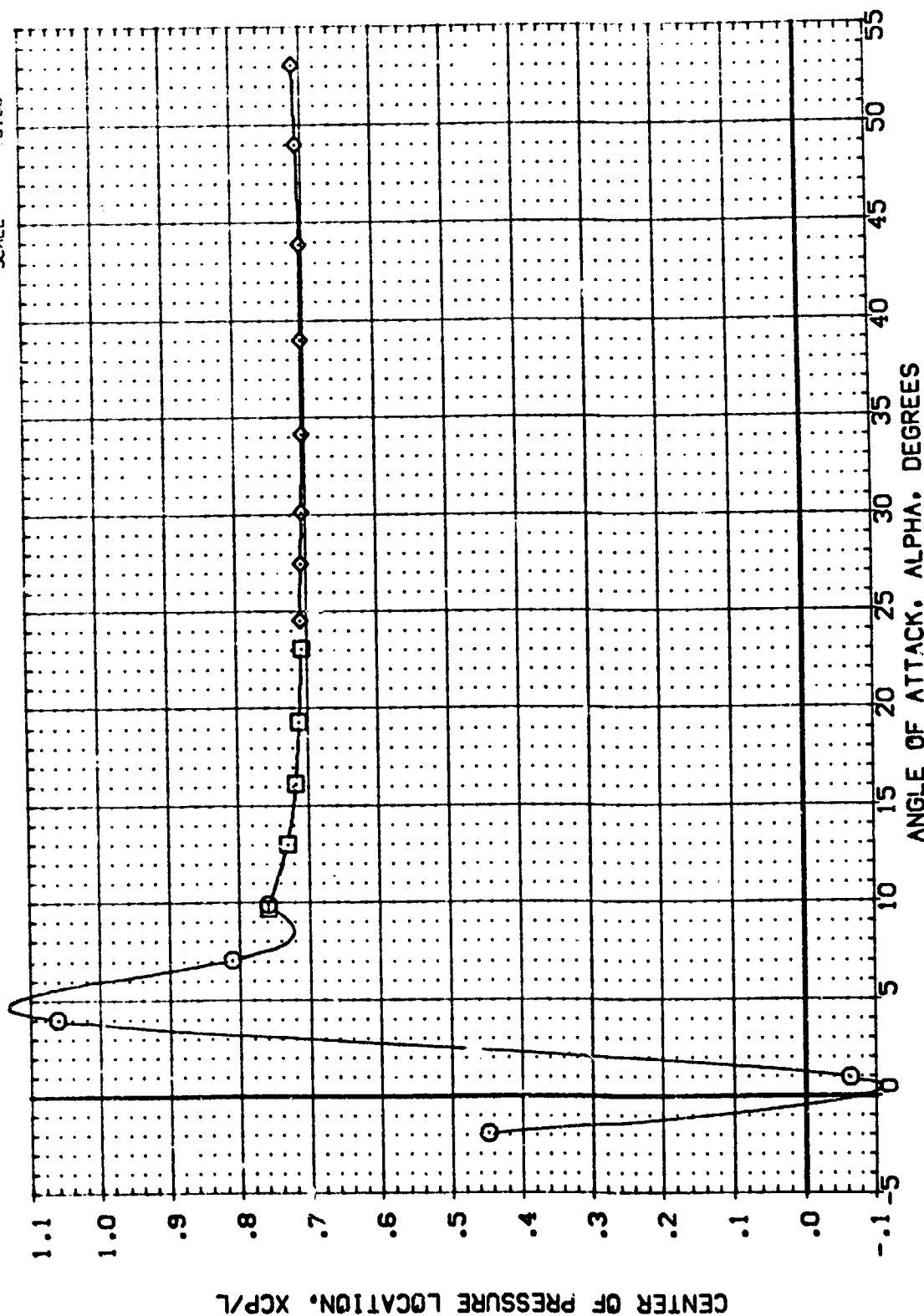


FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS

(A) MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BB0011)	AVES 3.5-160 OA11B (810F4C507H3-8) (V87E18) (V87E18)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BB0012)	AVES 3.5-160 OA11B (810F4C507H3-8) (V87E18) (V87E18)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
(BB0034)	AVES 3.5-160 OA11B (810F4C507H3-8) (V87E18) (V87E18)	10.000	.000	54.920	13.750	BREF 936.6800 IN.
						YARP 1076.4600 IN.
						ZARP 400.0000 IN.
						SCALE .0150

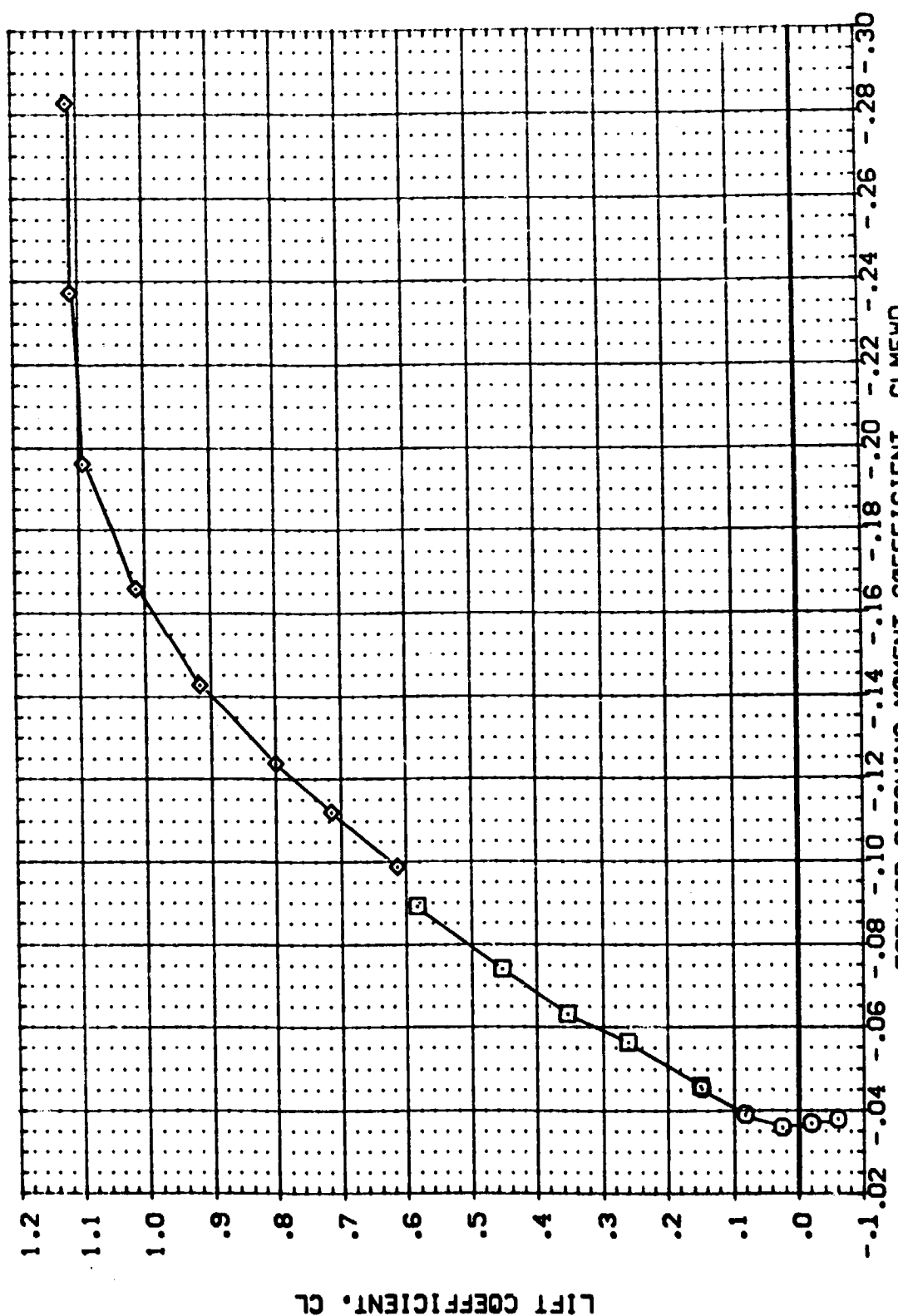


FIG. 2.C.2 MACH 7.32. 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(88X011)	AVES 3.5-160 0A11B (B10F4C507N3-8) (V87E18) (V5K5)	10.000	.000	54.920	13.750	SREF 2990.0000
(88X012)	AVES 3.5-160 0A11B (B10F4C507N3-8) (V87E18) (V5K5)	10.000	.000	54.920	13.750	LREF 474.6100
(88X034)	AVES 3.5-160 0A11B (B10F4C507N3-8) (V87E18) (V5K5)	10.000	.000	54.920	13.750	BREF 936.6500
						XREF 1076.1800
						YREF .0000
						ZREF 400.0000
						SCALE 0.150

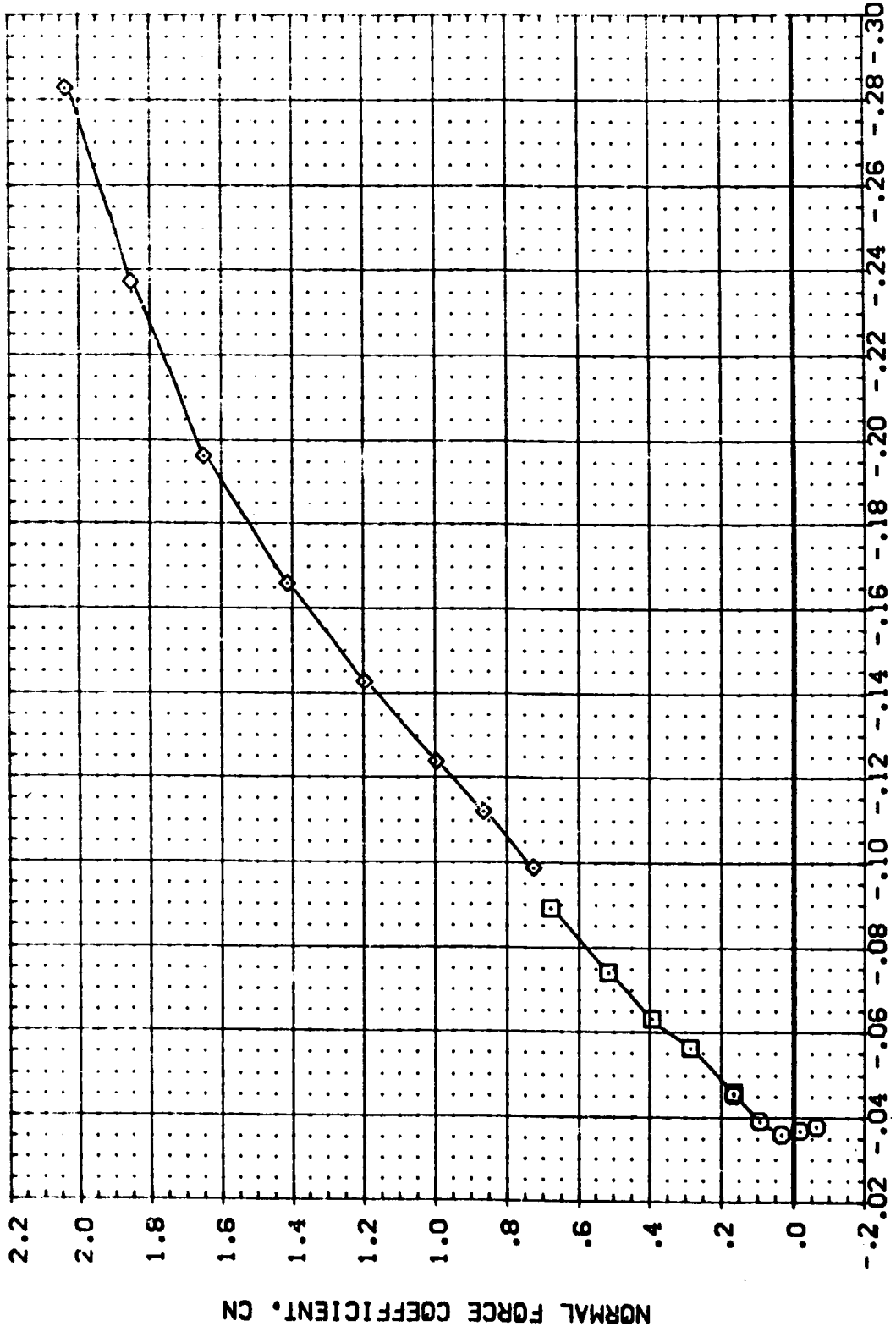
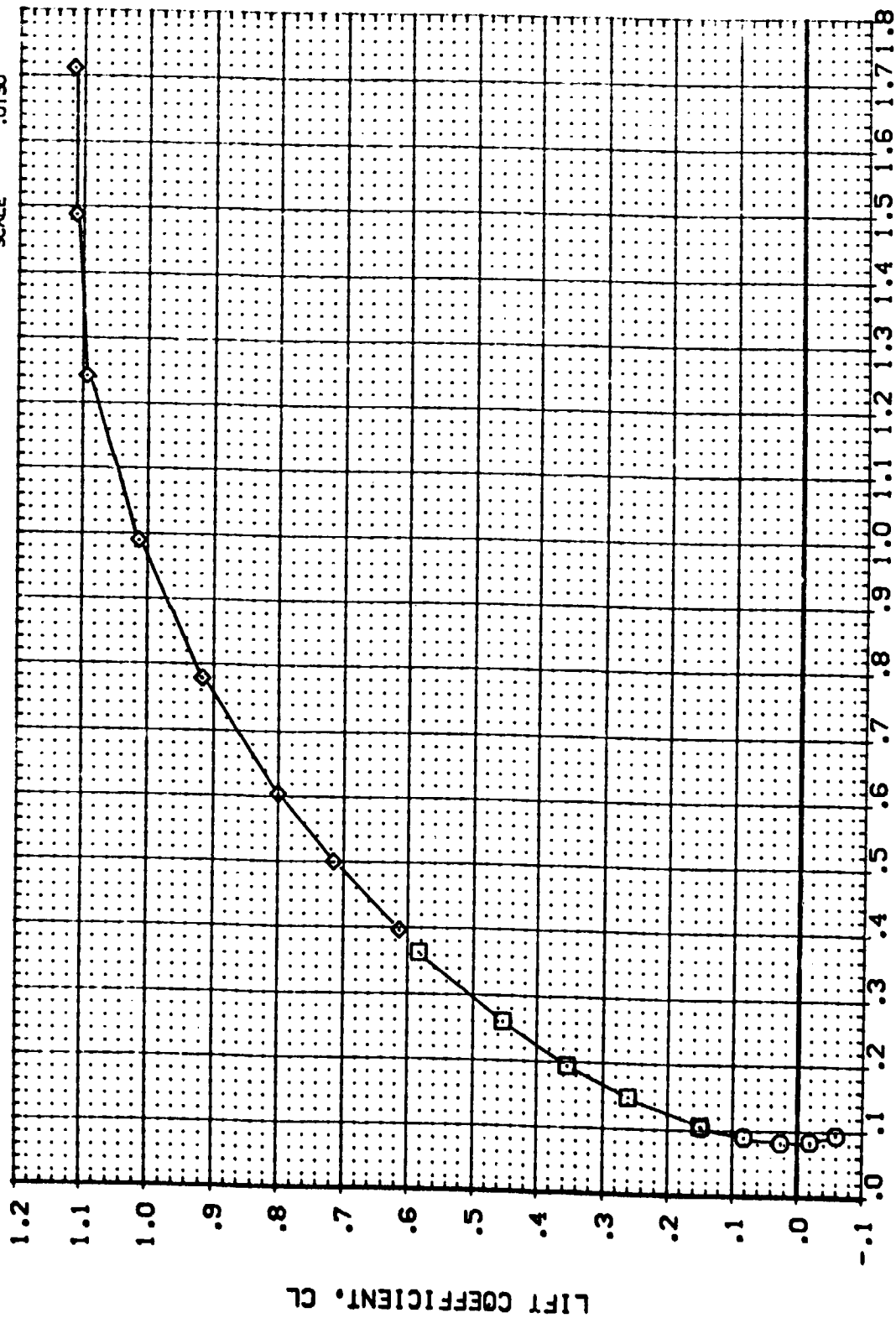


FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS

(A) MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPORARK	BOFLAP	REFERENCE INFORMATION
(BBX011)	AMES 3.5-160 CA11B (810F4CS07G08)(V87E10)(VSR5)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BBX012)	AMES 3.5-160 CA11B (810F4CS07G08)(V87E10)(VSR5)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
(BBX034)	AMES 3.5-160 CA11B (810F4CS07G08)(V87E10)(VSR5)	10.000	.000	54.920	13.750	BREF 936.6800 IN.
						XTRP 1076.4800 IN.
						YTRP .0000 IN.
						ZTRP .0000 IN.
						SCALE 400.0000
						.0150



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FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	STOBRK	BOFLAP	REFERENCE INFORMATION
(AB0011)	AMES 3.5-160 CA11B (B10F4C507M3B)(V87E18)(V5RS)	10.000	.000	54.920	13.750	SREF 2690.0000 SO.FT.
(AB0012)	AMES 3.5-160 CA11B (B10F4C507M3B)(V87E18)(V5RS)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
(AB0034)	AMES 3.5-160 CA11B (B10F4C507M3B)(V87E18)(V5RS)	10.000	.000	54.920	13.750	BREF 936.0800 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE 10150

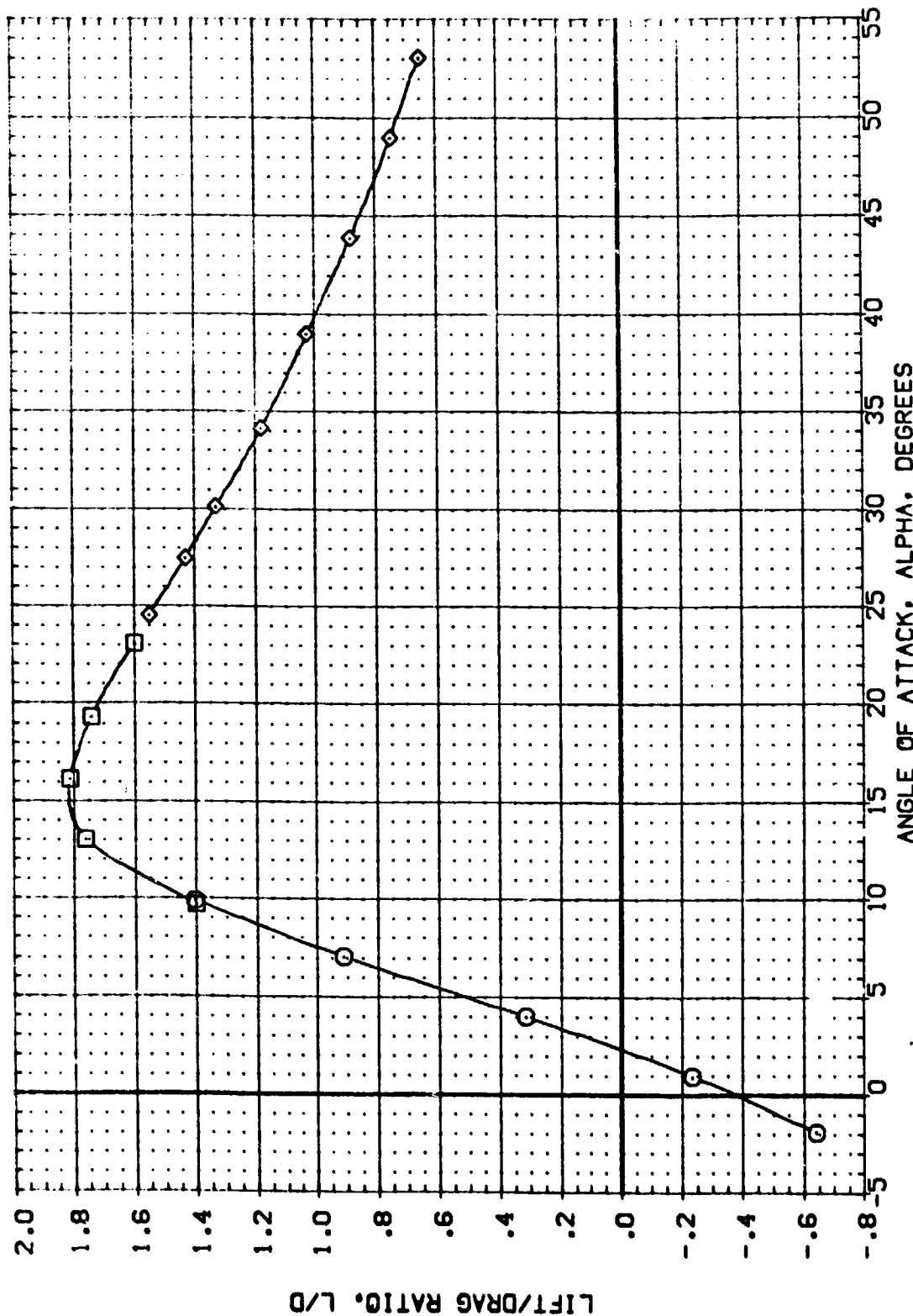


FIG. 2.C.2 MACH 7.32, 10 DEGREE ELEVON EFFECTS

(A)MACH = 7.32

DATA SET SYMB.	CONF. DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(BB0042)	AVES 3.5-160 CA118 (B10F4C507H08)(V87E18)(V5R5)	10.000	.000	54.920	13.750	SREF 2690.0000 50.FT.
(BB0039)	AVES 3.5-160 CA118 (B10F4C507H08)(V87E18)(V5R5)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XPRP 1076.4800 IN.
						YPRP 400.0000 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

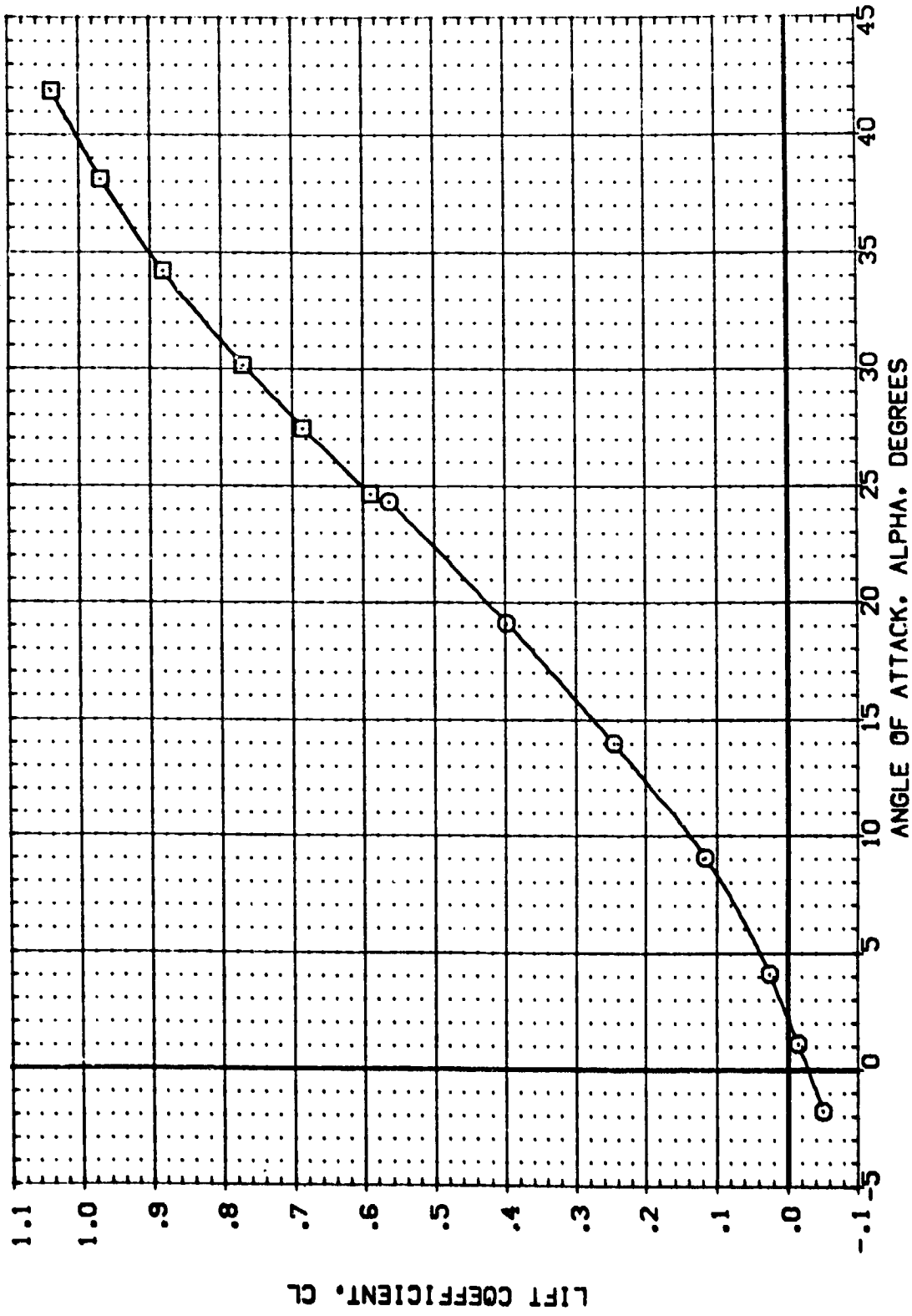


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS
(MACH = 10.29)

DATA SET SYMBOL (B8X042) (B8X036)

CONFIGURATION DESCRIPTION
 AYES 3.5-160 0A118 (B10F4C507)G48 (V87E)8 (V5RS)
 AYES 3.5-160 0A118 (B10F4C507)G48 (V87E)8 (V5RS)

ELEVON 10.000
 RUDDER .000
 SPDBRK 54.920
 BOFLAP 13.750

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.0100 IN.
 BREF 936.0000 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

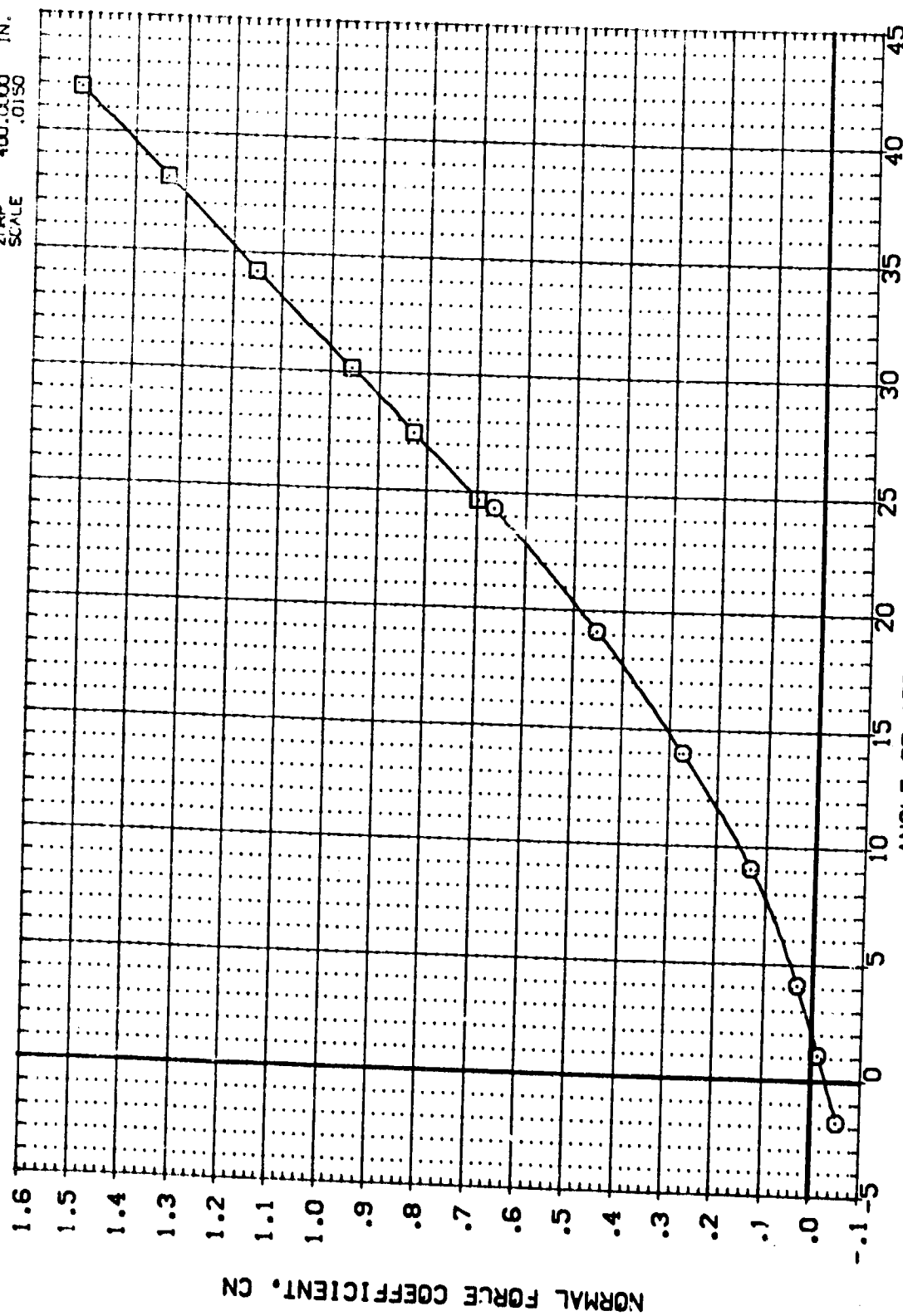


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRBK	BOFLAP	REFERENCE INFORMATION	
(BBX042)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V5R5)	10.000	.000	54.920	13.750	SREF	2690.0000 SQ.FT.
(BBX038)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V5R5)	10.000	.000	54.920	13.750	LREF	474.8100 IN.
						BREF	935.6800 IN.
						XMRP	1076.4800 IN.
						YMRP	.0000 IN.
						ZMRP	.0000 IN.
						SCALE	400.0000
							.0150

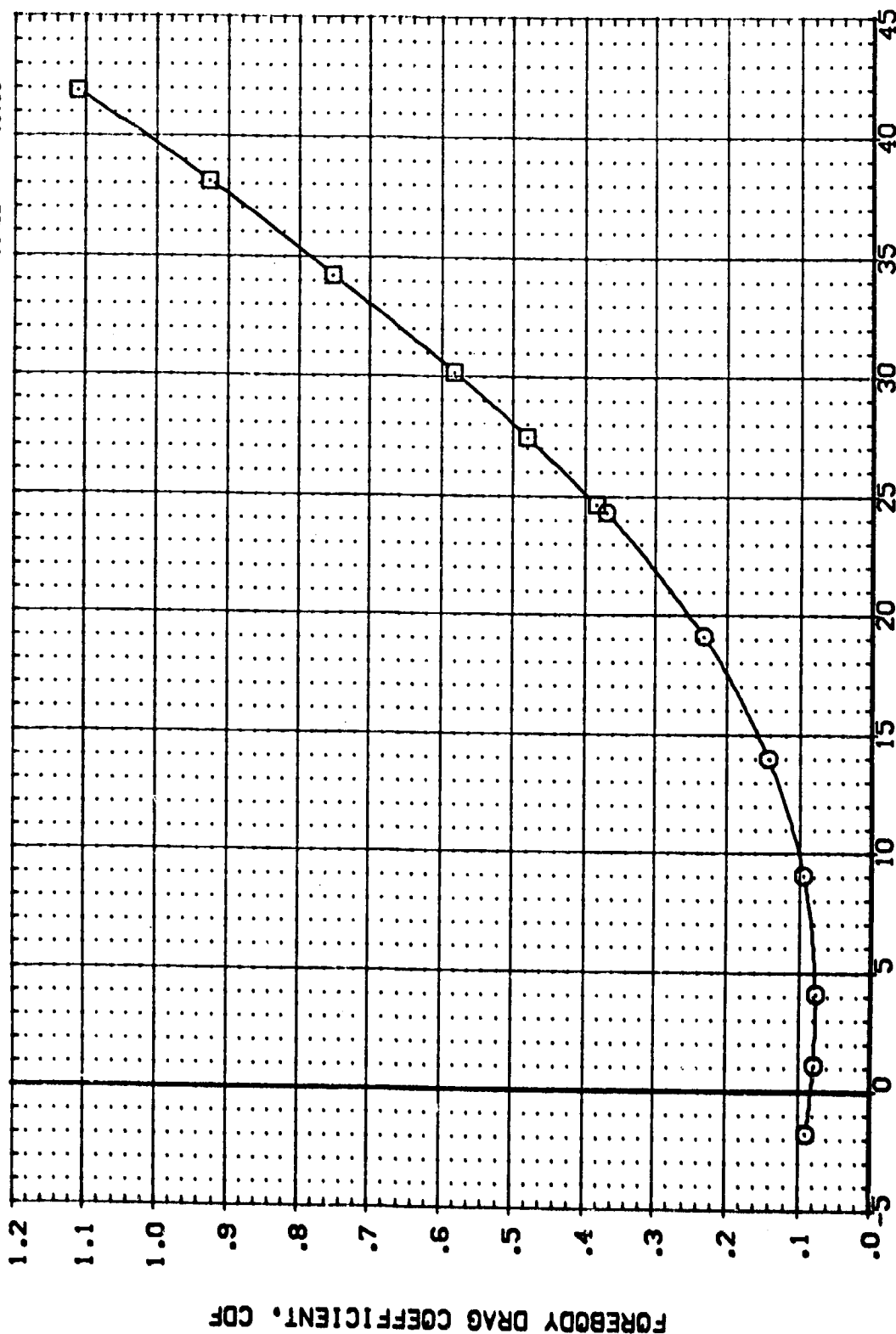


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BB042)	AVES 3.5-160 OA118 (B10F4C507M3-8) (V87E18) (V555)	10.000	.000	54.920	13.750	SA-IF 1000.0000 50.000
(BB039)	AVES 3.5-160 OA118 (B10F4C507M3-8) (V87E18) (V545)	10.000	.000	54.920	13.750	LR-IF 474.8100 10.000
						LR-IF 936.4500 10.000
						XR-IF 1076.4500 10.000
						YMRP 400.0000 10.000
						SCALE 0150

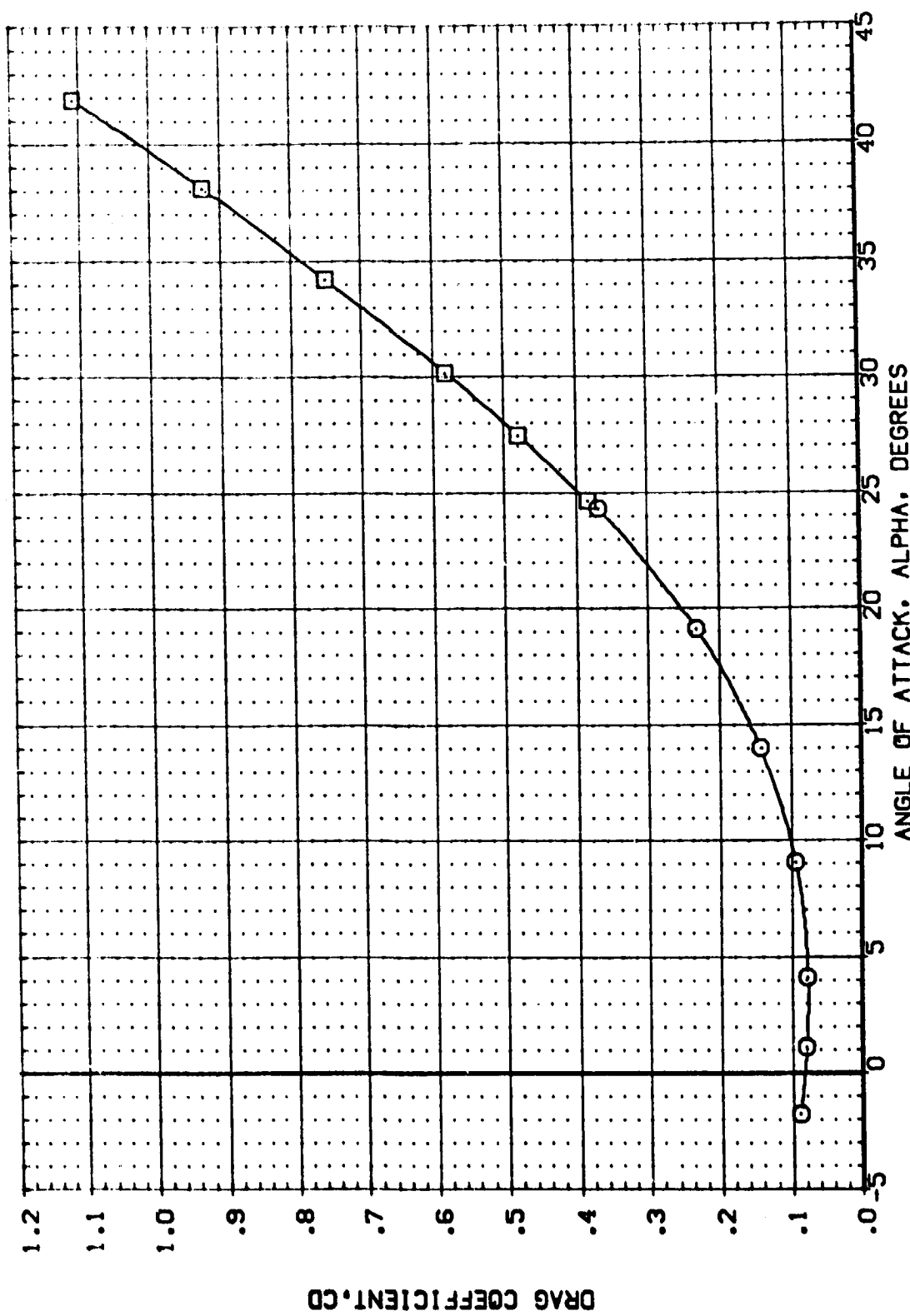


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPORCK	BOFLAP	REFERENCE INFORMATION
(BBX042)	AVES 3.5-160 CA11B (B1D4C507N3B)(V87E18)(V5R5)	10.000	.000	54.920	13.750	SREF 2690.0000 50.FT.
(BBX039)	AVES 3.5-160 CA11B (B1D4C507N3B)(V87E18)(V5R5)	10.000	.000	54.920	13.750	LREF 474.810' IN.
						BREF 935.6800 IN.
						YMRP 10' 6.4800 IN.
						ZMRP .0000 IN.
						SCALE .0150

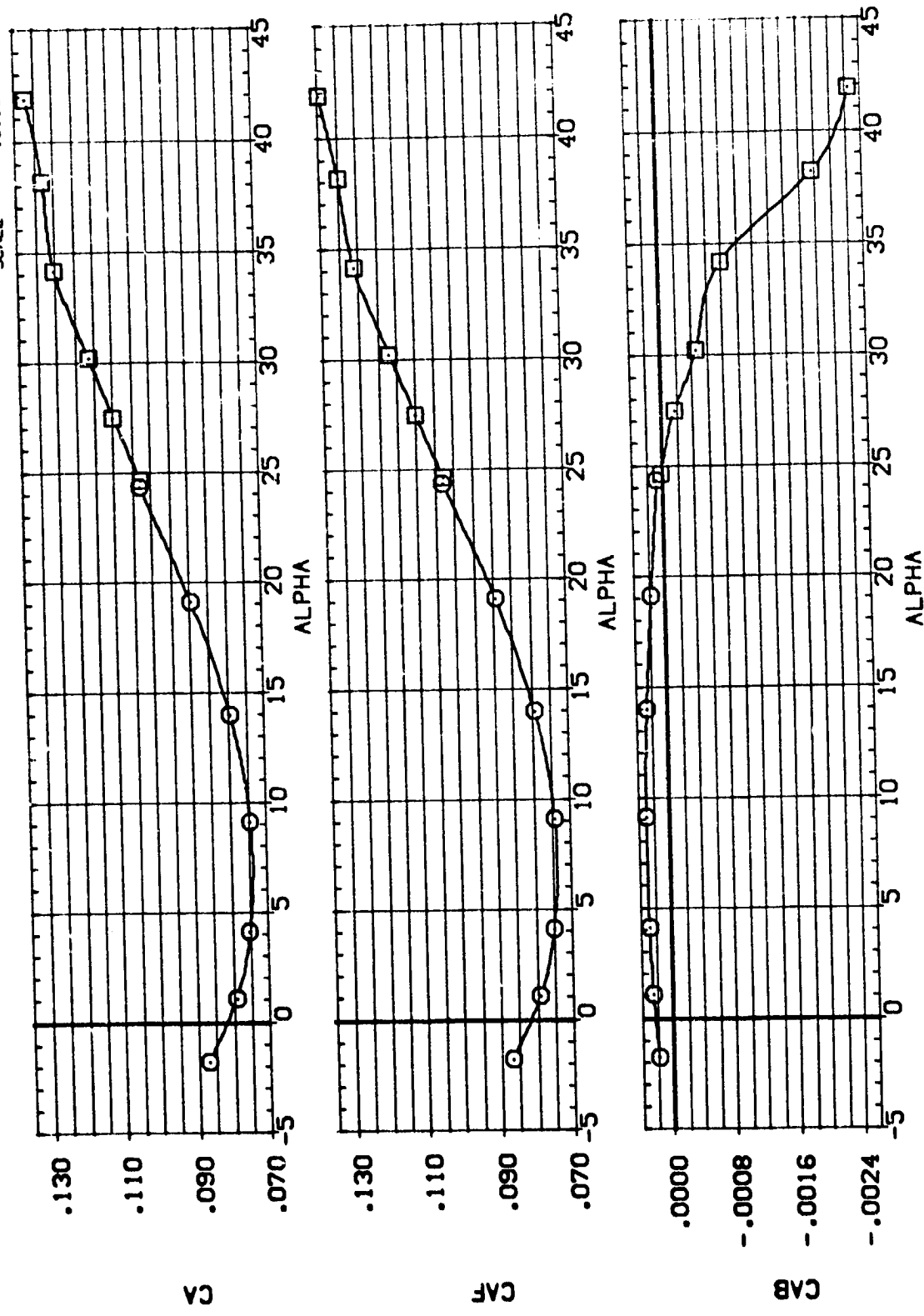


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL: (BB/042) (BB/039)

CONFIGURATION DESCRIPTION: AYES 3.5-160 DAI1B (B10F4C507M3-8) (V87E18) (V595) AYES 3.5-160 DAI1B (B10F4C507M3-8) (V87E18) (V595)

REFERENCE INFORMATION: SRKF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 536.5900 IN. XREF 1076.4800 IN. YMRP .0000 IN. ZMRP .0000 IN. SCALE 400 .0150

ROFLAP 13.750

SPOCK 54.920 54.920

RUDER .000 .000

ELEVON 10.000 10.000

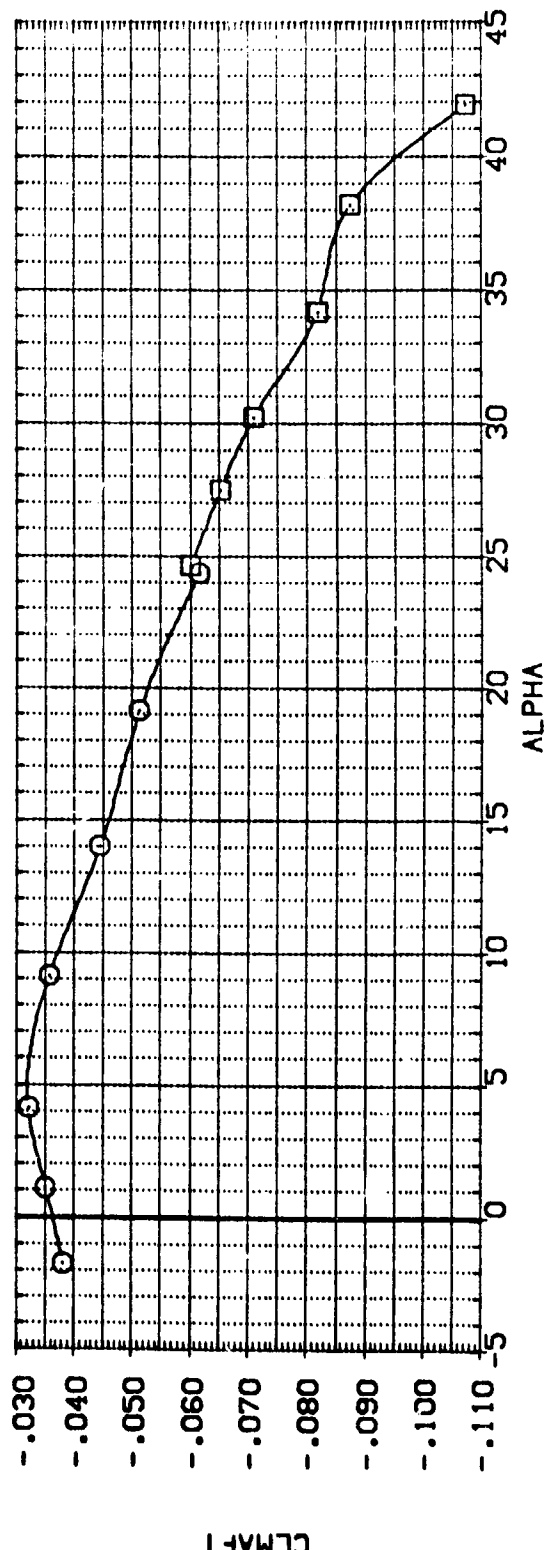
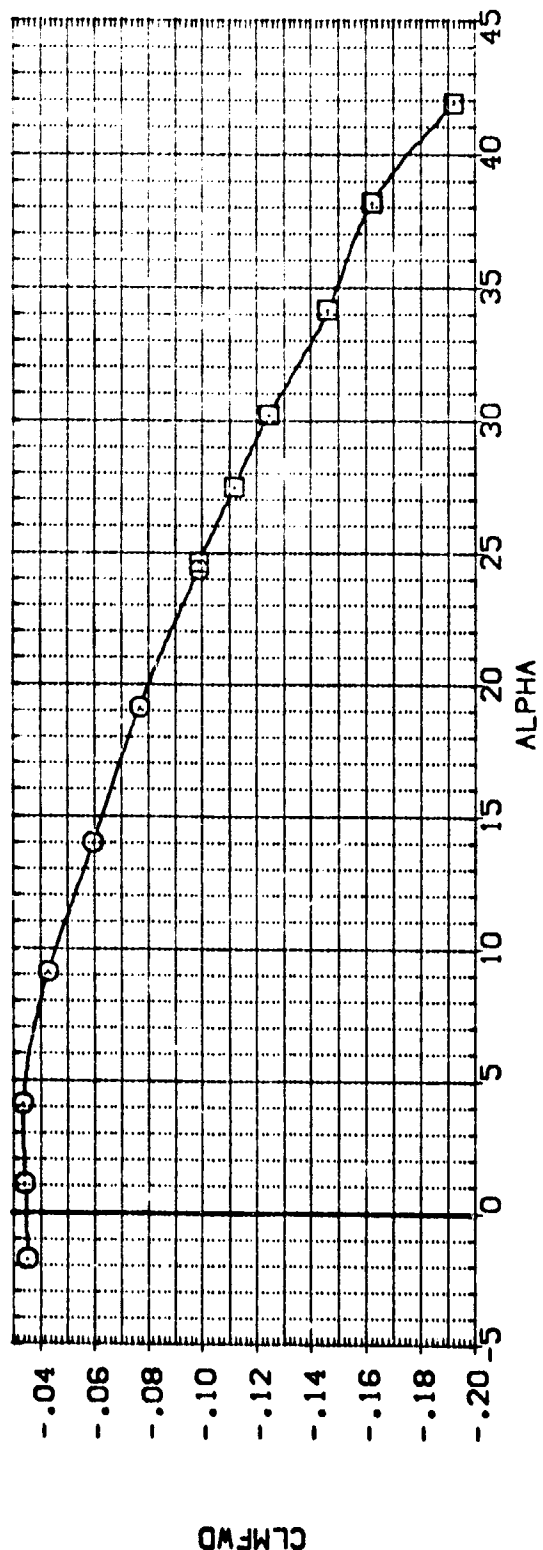


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BOFLAP	REFERENCE INFORMATION
(BB0042)	AVES 3.5-160 DA178 (B10F4CS07G48)(V67E18)(V59S)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BB0039)	AVES 3.5-160 DA178 (B10F4CS07G48)(V67E18)(V59S)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XPRP :076.4800 IN.
						YPRP :0000 IN.
						ZPRP :0000 IN.
						SCALE 400.0000

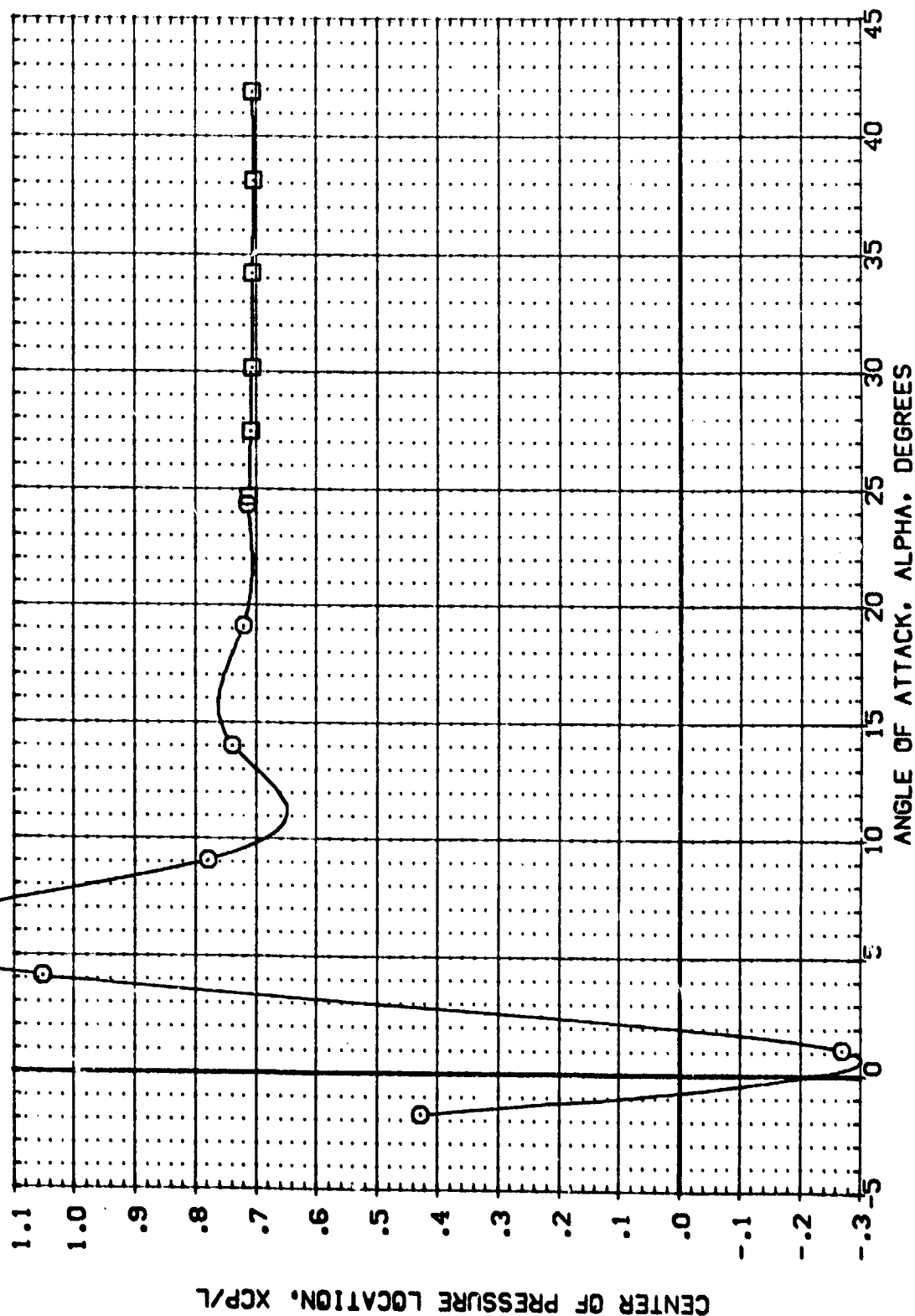


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX042)	AVES 3.5-160 GA11B (810F4C507H3-8)(V87E18)(V59S)	10.000	.000	54.920	13.750	SREF 2690.0700 0.0 FT.
(BBX039)	AVES 3.5-160 GA11B (810F4C507H3-8)(V87E18)(V59S)	10.000	.000	54.920	13.750	LREF 474.8700 0.0 FT.
						BREF 936.8400 0.0 FT.
						XREF 1076.4300 0.0 FT.
						YREF 0.000 0.0 FT.
						ZREF 400.0000 0.0 FT.
						SCALE .0150

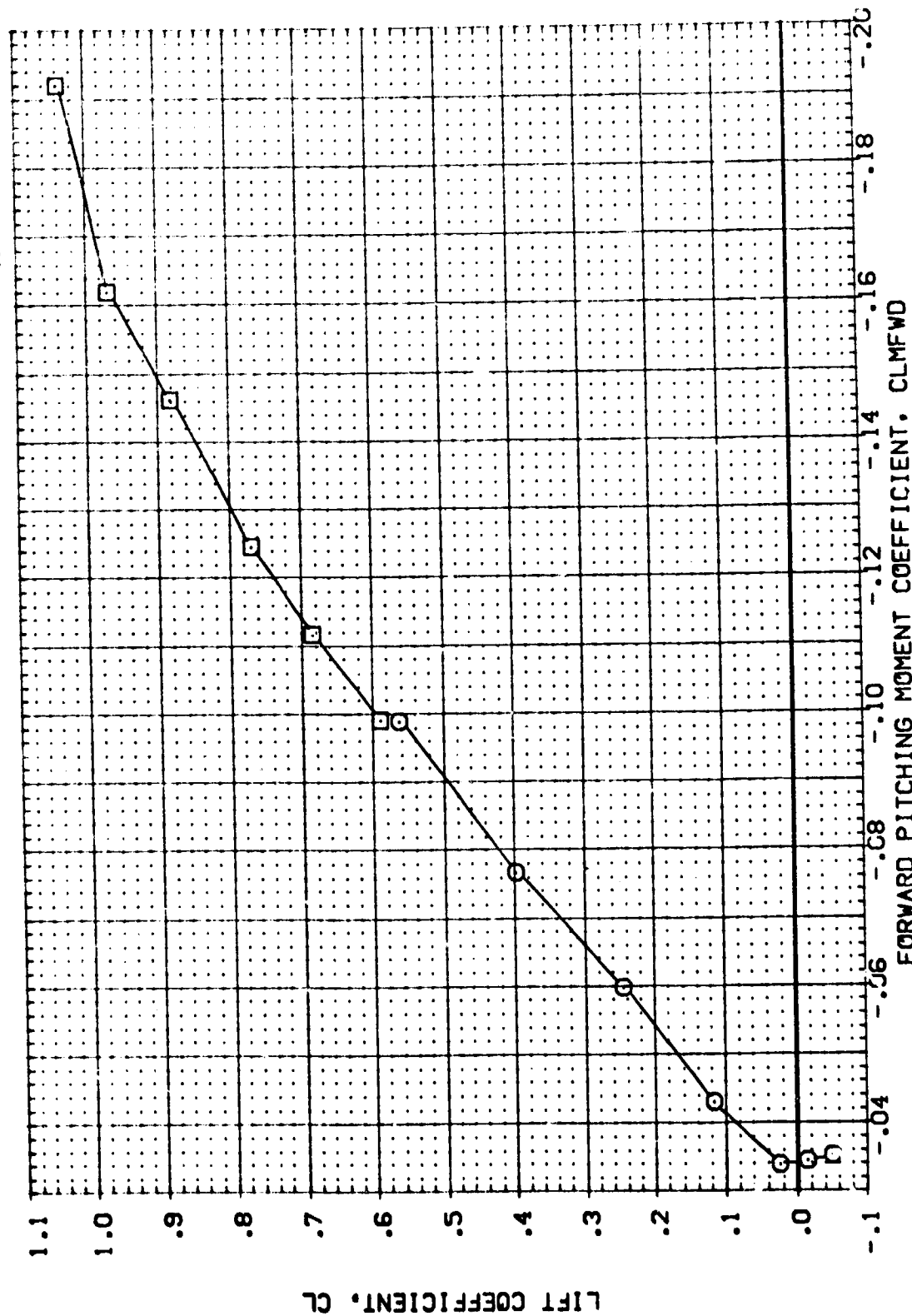


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX042)	AVES 3.5-160 CA11B (B10F4C507H348)(V87E18)(V59S)	10.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BBX039)	AVES 3.5-160 CA11B (B10F4C507H348)(V87E18)(V59S)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XTRP 1076.4800 IN.
						YTRP .0000 IN.
						ZTRP .0000 IN.
						SCALE .0150

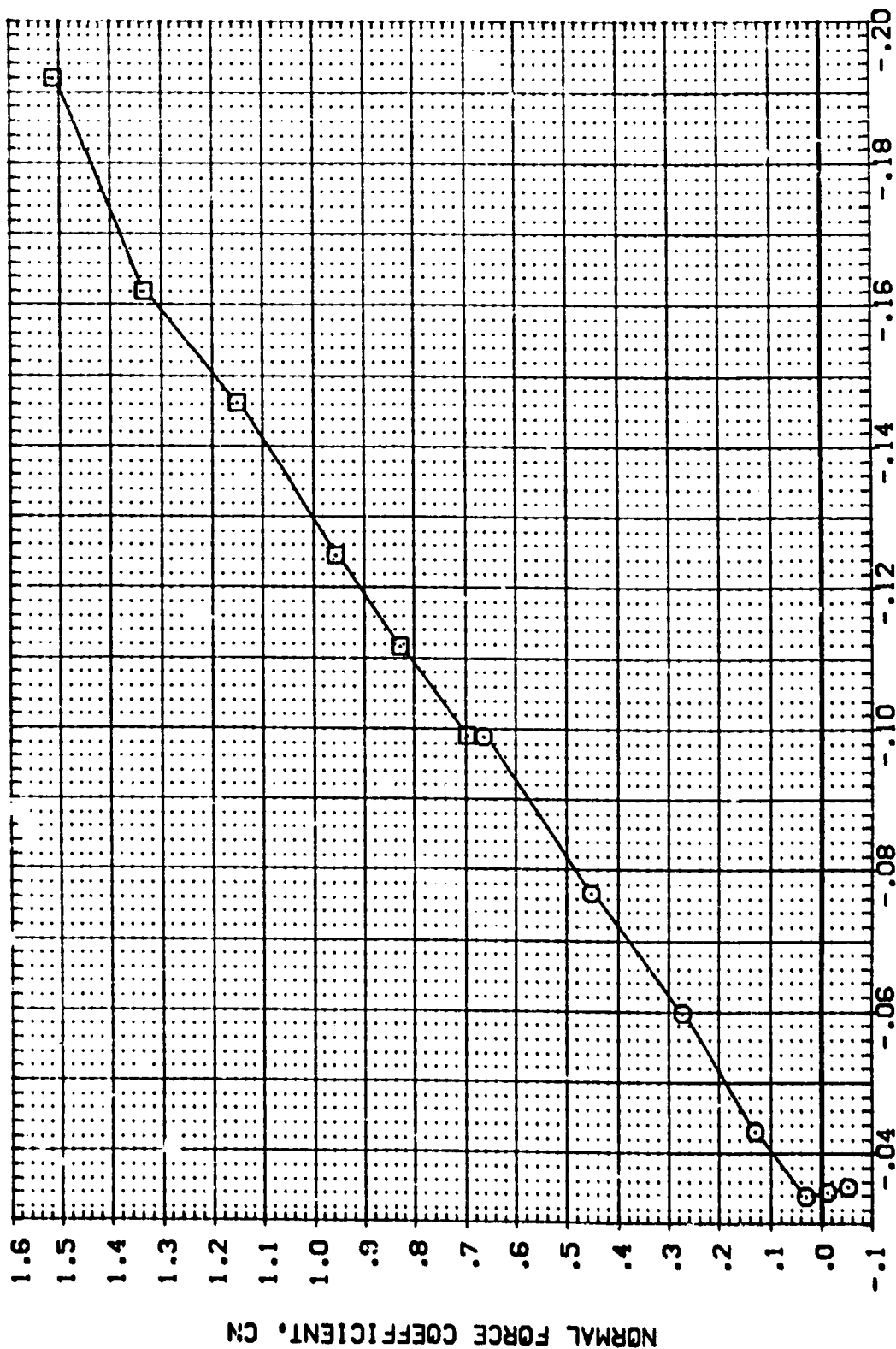


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDGRK	BOFLAP	REFERENCE INFORMATION
(BBX042)	AVES 3.5-160 0A118 (B10F4C507G4B)(V87E18)(V50S)	10.000	.000	51.920	13.750	SREF 2690.0000
(BBX009)	AVES 3.5-160 0A118 (B10F4C507G4B)(V87E18)(V50S)	10.000	.000	51.920	13.750	LREF 474.0100
						BREF 936.6800
						XMRP 1076.4800
						YMRP .0000
						ZMRP 400.0000
						SCALE .0150

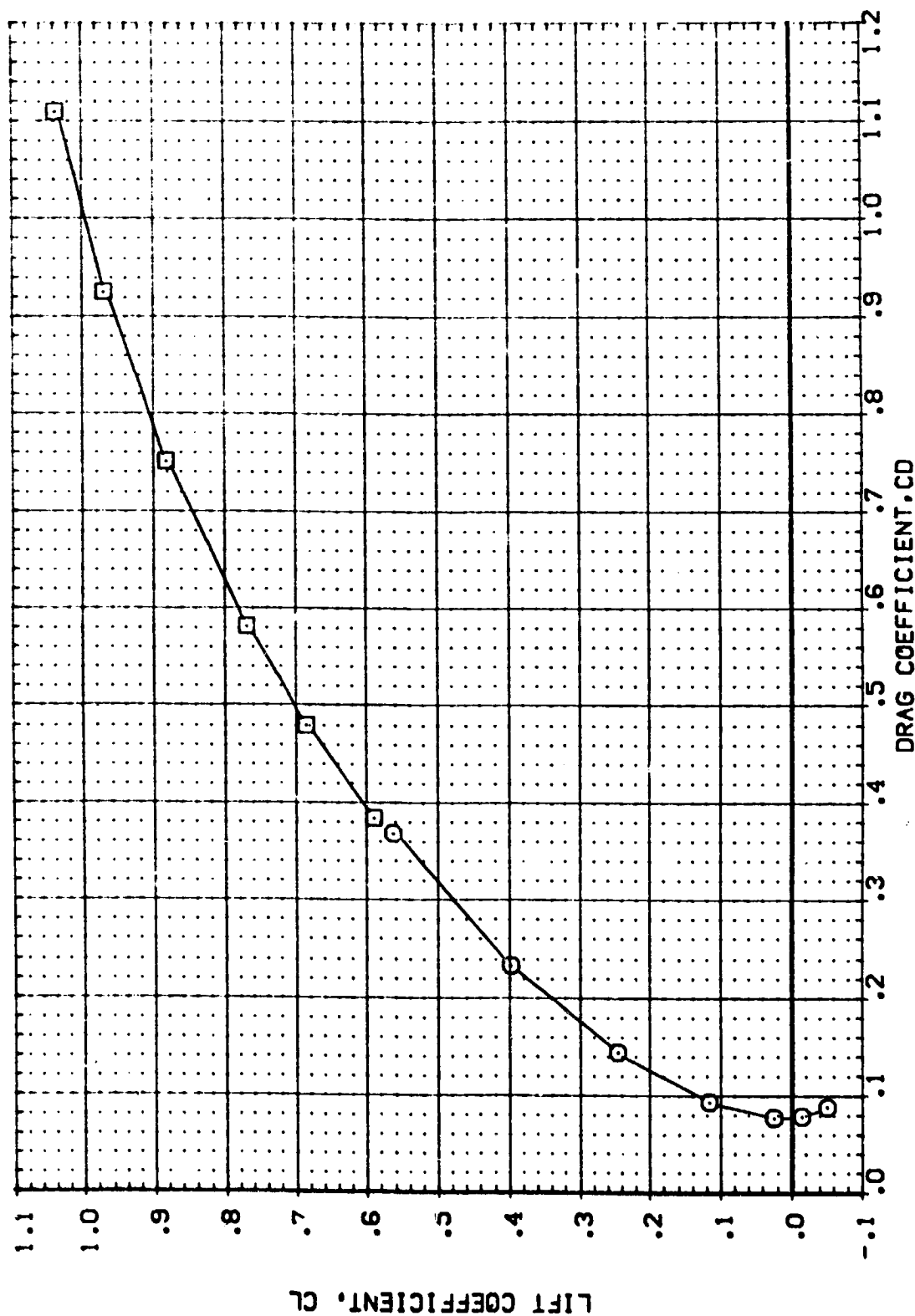


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS
(A) MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(AB042)	AMES 3.5-160 CA11B (B10F4C507G-8)(W87E18)(VSR5)	10.000	.000	54.920	13.750	SREF 2650.0000 SQ.FT.
(AB039)	AMES 3.5-160 CA11B (B10F4C507G-8)(W87E18)(VSR5)	10.000	.000	54.920	13.750	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP 400.0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

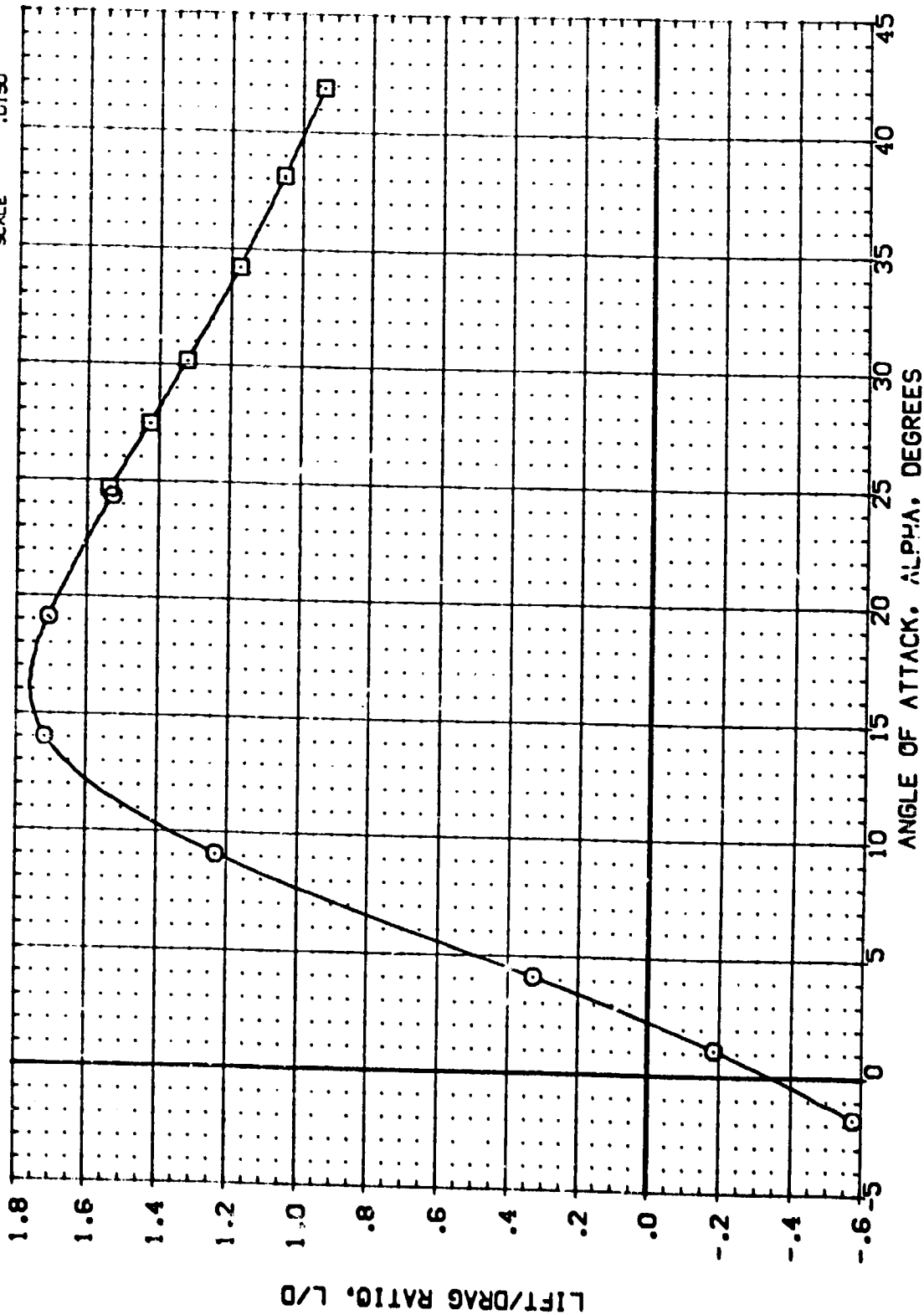


FIG. 2.C.3 MACH 10.29 10 DEGREE ELEVON EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		DELEW		DELOOF	
(BX046)	AVES 3.5-160	CA11B	(B10F4C507H3-8)(V97E18)(V5RS)	-40.000	.000		
(FBX048)	AVES 3.5-160	CA11B	(B10F4C507H3-8)(V67E18)(V5RS)	-40.000	.000		
(FBX049)	AVES 3.5-160	CA11B	(B10F4C507H3-8)(V67E18)(V5RS)	10.000	28.000		
(FBX049)	AVES 3.5-160	CA11B	(B10F4C507H3-8)(V67E18)(V5RS)	10.000	28.000		

REFERENCE INFORMATION	
SREF	2650.3A.0 SO.FT.
LN	474.3100 IN.
BR	936.8000 IN.
MR	1076.4000 IN.
TR	1000.0000 IN.
ZMR	400.0000 IN.
SCALE	.0150

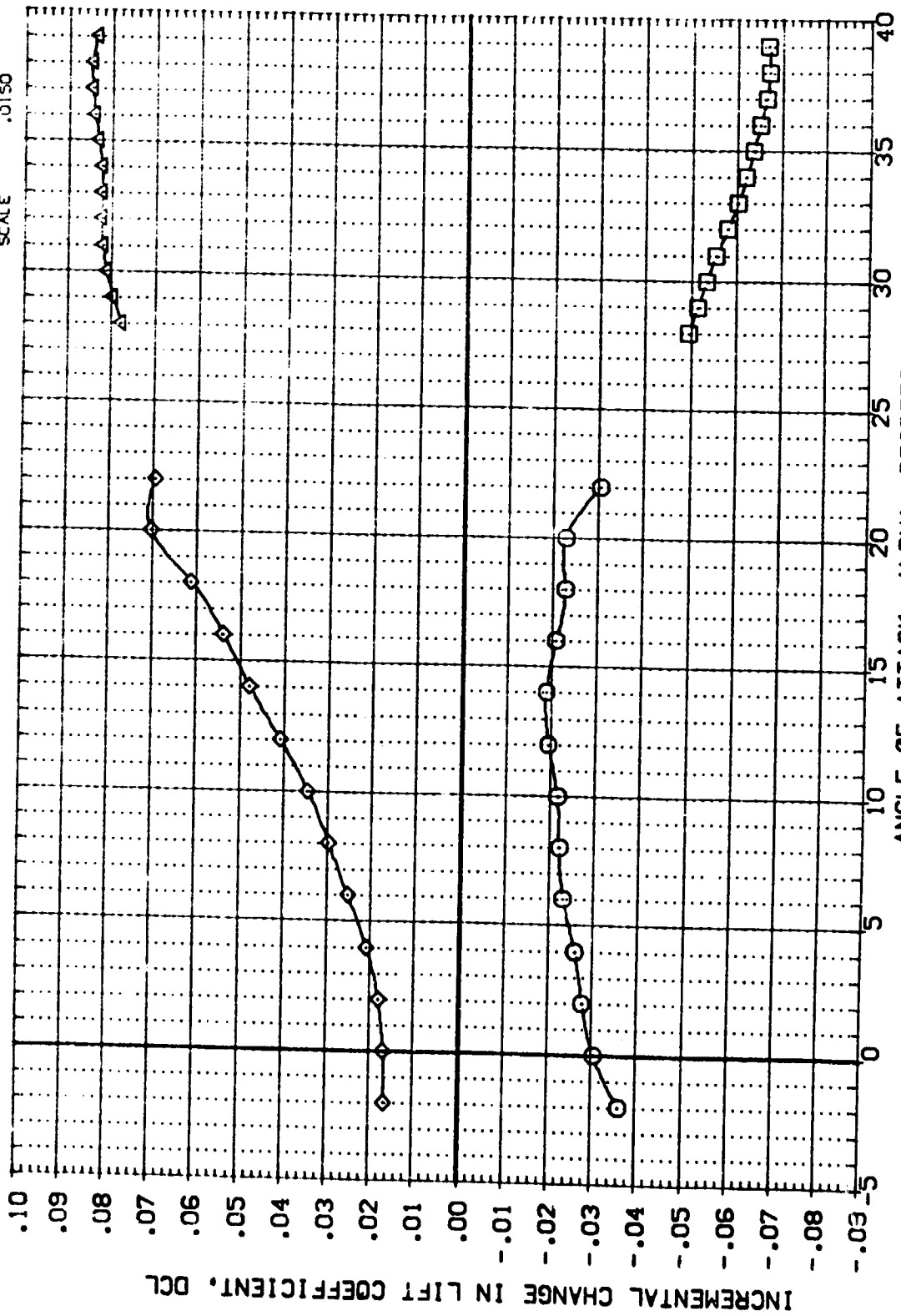


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(M)MACH = 5.26

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XPRP 1076.4800 IN.
 YPRP 400.0000 IN.
 ZPRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 -40.000 .000
 -40.000 .000
 10.000 28.000
 10.000 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FBK065)
 (FBK049)
 (FBK065)
 (FBK049)

AVES 3.5-160 CA118 (B10F4C507)GN8 (V87E18)(V5MS)
 AVES 3.5-160 CA118 (B10F4C507)GN8 (V87E18)(V5MS)
 AVES 3.5-160 CA118 (B10F4C507)GN8 (V87E18)(V5MS)
 AVES 3.5-160 CA118 (B10F4C507)GN8 (V87E18)(V5MS)

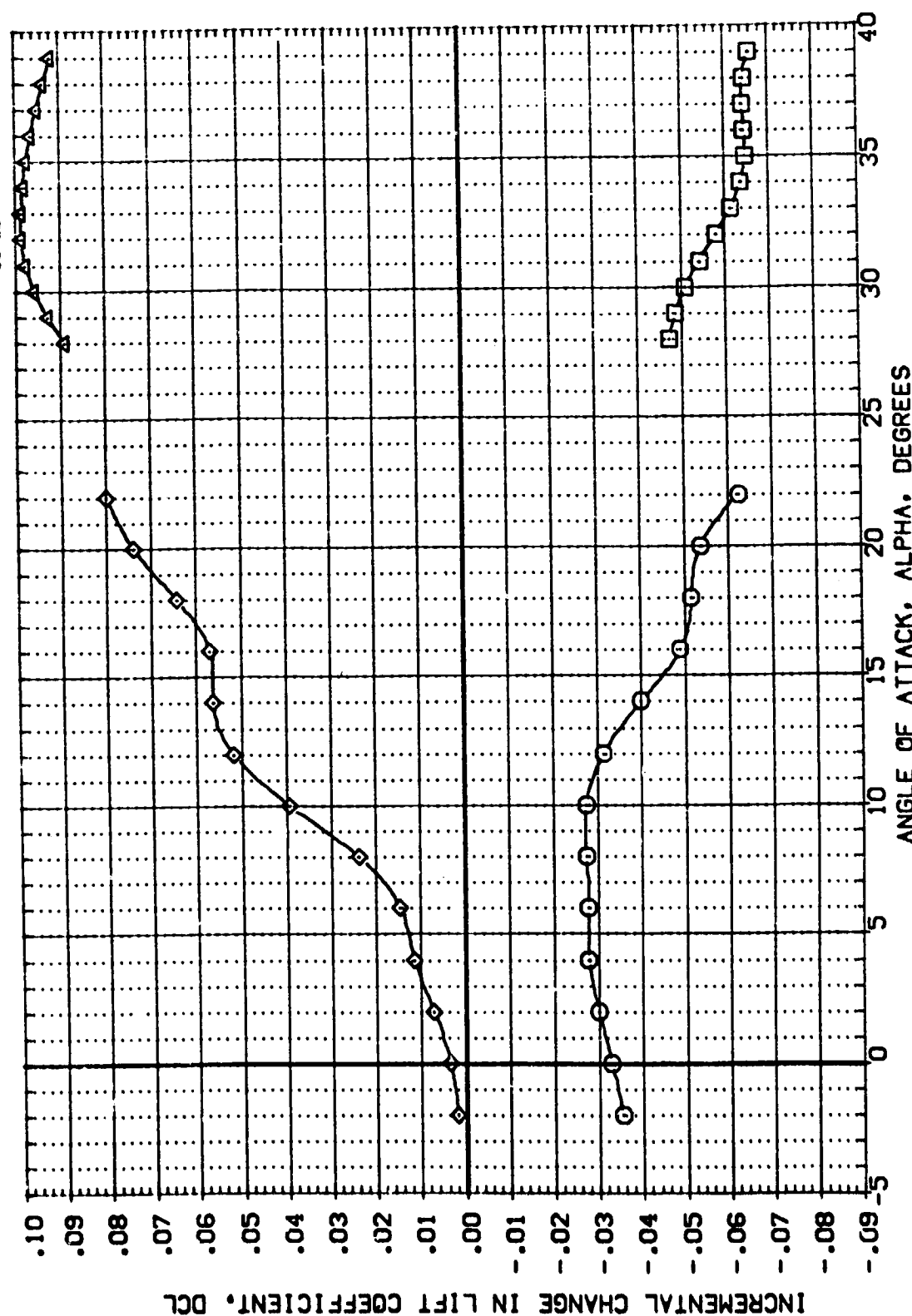


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(B)MACH = 7.32

REFERENCE INFORMATION

SPEC	2630.0000	SO.FT.
LRA	474.8100	N
DATE	936.5800	N
XMRP	1076.4800	N
YMRP	400.0000	N
ZMRP	400.0000	N
SCALE	.0150	

DELBOF

DELEVN	-10.000
DELEVN	-10.000
DELEVN	28.000
DELEVN	28.000

DATA SET SYMBOL

AXES 3.5-160	DA118	(B10F4C507N3B)(V87E18)(V54S)
AXES 3.5-160	DA118	(B10F4C507N3B)(V87E18)(V54S)
AXES 3.5-160	DA118	(B10F4C507N3B)(V87E18)(V54S)
AXES 3.5-160	DA118	(B10F4C507N3B)(V87E18)(V54S)

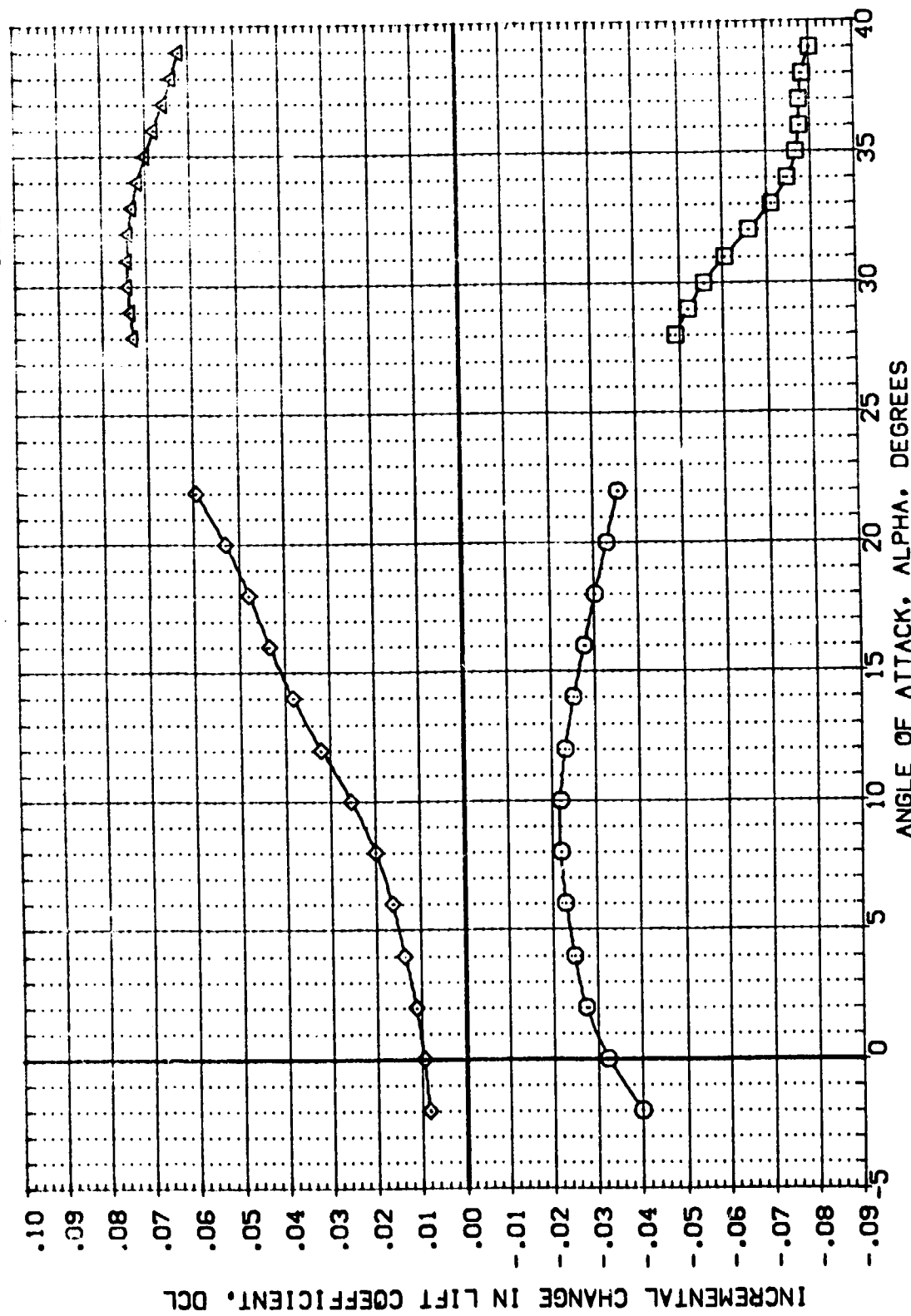


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(C)MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL ELEV	DEL BOF	REFERENCE INFORMATION
(FBX055)	AVES 3.5-160 DA11B (810-4C507G-8)(V87E18)(V595)	-40.000	.000	SREF 2690.0000 SO.FT.
(FBX048)	AVES 3.5-160 DA11B (810-4C507G-8)(V87E18)(V595)	-40.000	.000	LREF 474.8100 IN.
(FBX065)	AVES 3.5-160 DA11B (810-4C507G-8)(V87E18)(V595)	10.000	28.000	BREF 936.6800 IN.
(FBX049)	AVES 3.5-160 DA11B (810-4C507G-8)(V87E18)(V595)	10.000	28.000	XMRP 1076.4800 IN.
				YMRP 400.0000 IN.
				ZMRP 400.0000 IN.
				SCALE .0150

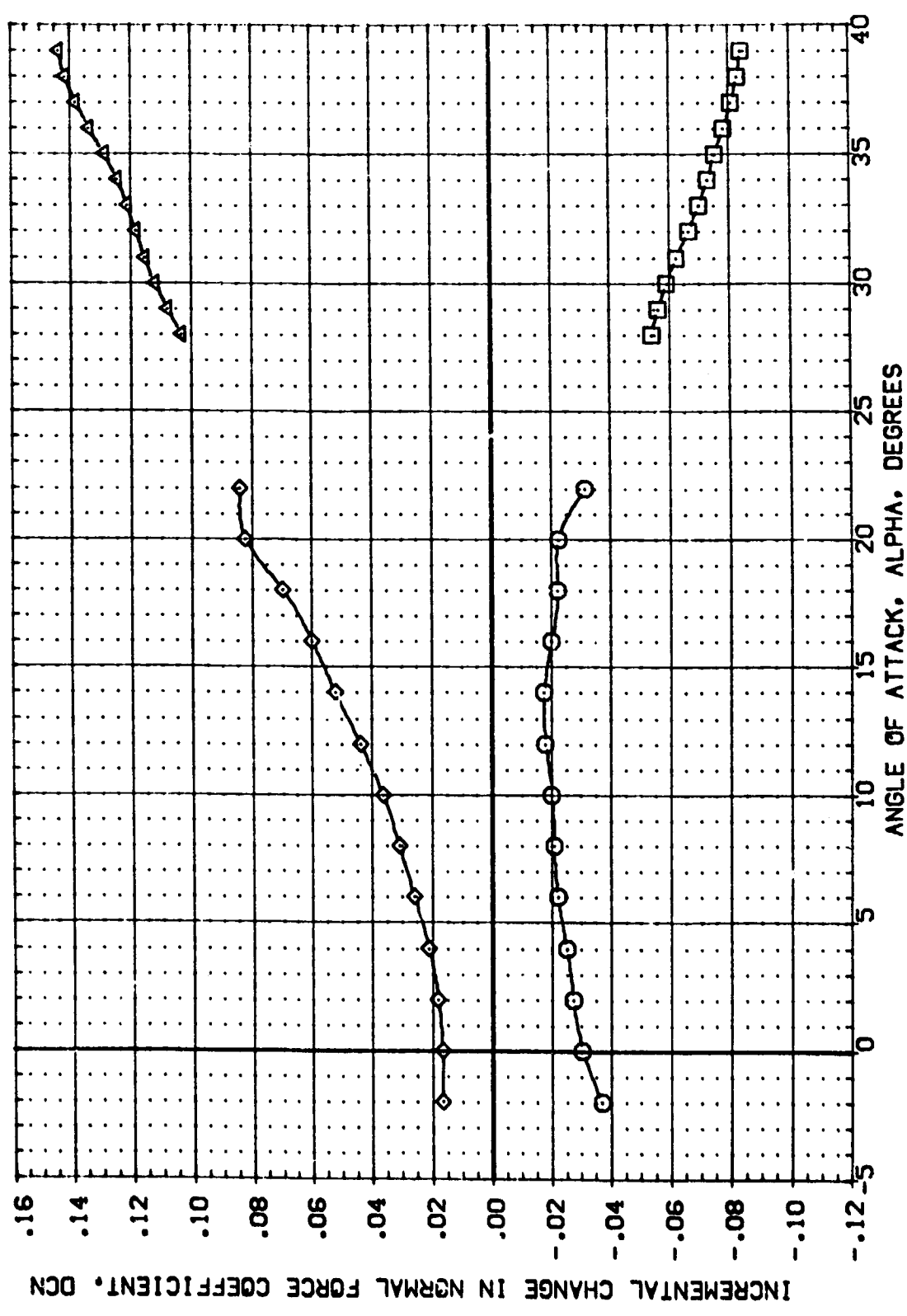


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(A)MACH = 5.26

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.0100 IN.
 BREF 936.5800 IN.
 XMRP 1076.4500 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELBOF
 DELEVN
 -40.000
 -40.000
 28.000
 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FBX055)
 (FBX048)
 (FBX055)
 (FBX049)

AVES 3.5-160 DA118 (B1D4CS07H3-8) (V87E18) (VS95)
 AVES 3.5-160 DA118 (B1D4CS07H3-8) (V87E18) (VS95)
 AVES 3.5-160 DA118 (B1D4CS07H3-8) (V87E18) (VS95)
 AVES 3.5-160 DA118 (B1D4CS07H3-8) (V87E18) (VS95)

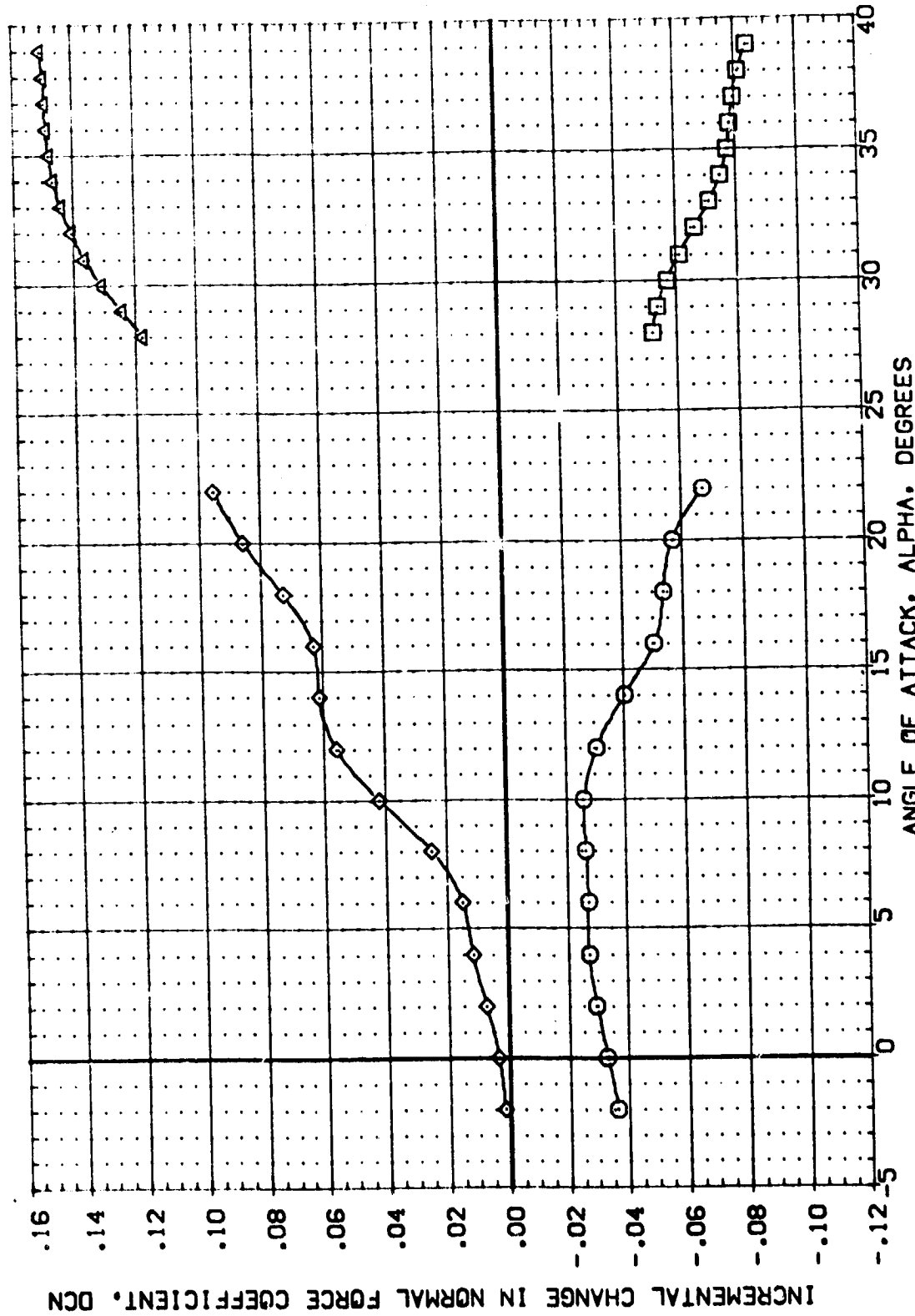


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(B)MACH = 7.32

REFERENCE INFORMATION

SREF	2690.0000	50. FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XPRP	1076.4800	IN.
YPRP	.0000	IN.
ZPRP	400.0000	IN.
SCALE	.0150	

DELBOF

DELEV	.000
DELEV	-40.000
DELEV	-40.000
DELEV	28.000
DELEV	28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FBK066) AMES 3.5-160 OA11B (B10F4C507G3B)(V87E18)(V5RS)
 (FBK048) AMES 3.5-160 OA11C (B10F4C507G3B)(V87E18)(V5RS)
 (FBK065) AMES 3.5-160 OA11B (B10F4C507G3B)(V87E18)(V5RS)
 (FBK049) AMES 3.5-160 OA11B (B10F4C507G3B)(V87E18)(V5RS)

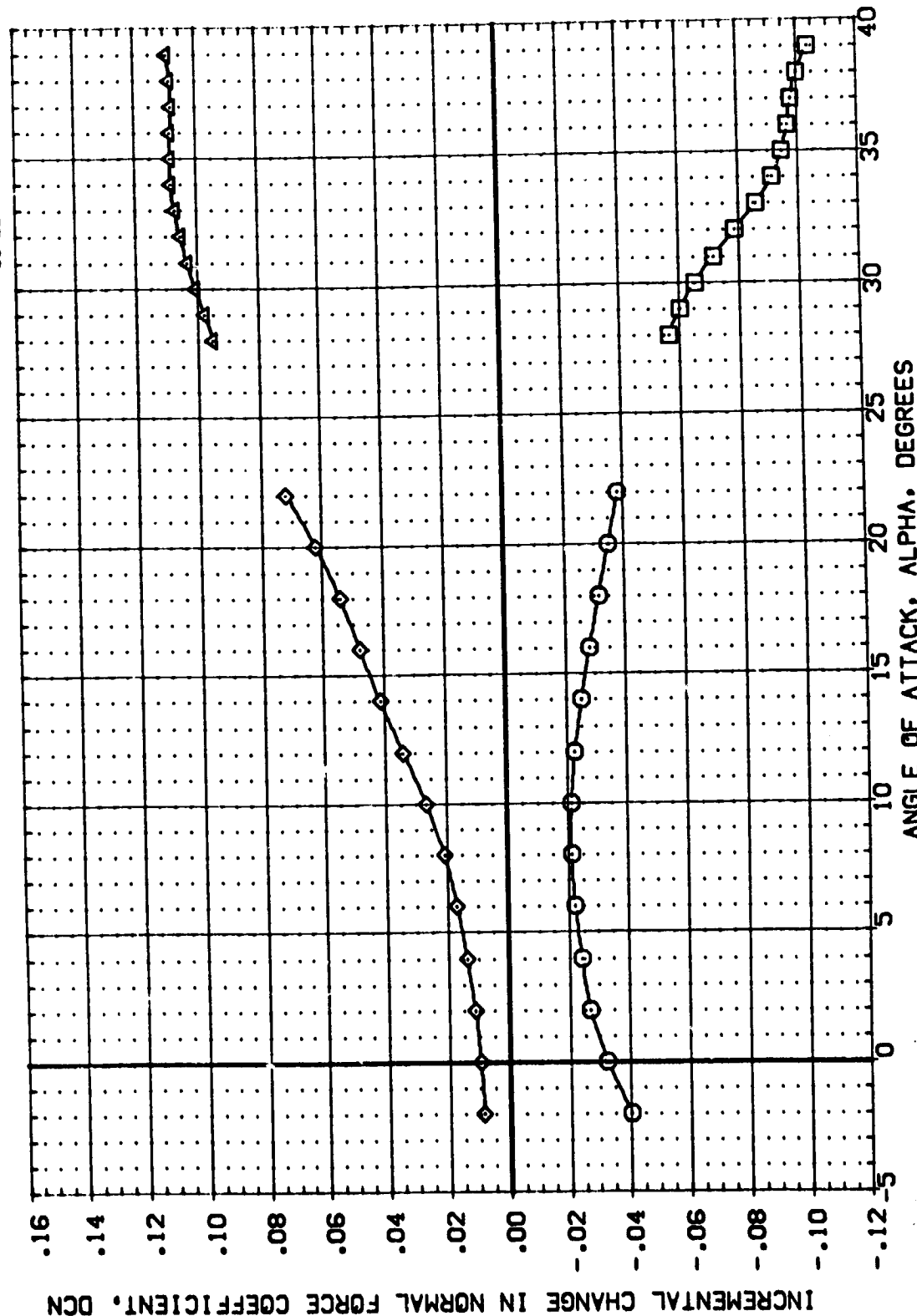


FIG. 2.D INCREMENTAL ELEVON EFFECTS

(C)MACH = 10.29

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 YMRP 1076.4800 IN.
 ZMRP .0000 IN.
 SCALE 400.0000
 .0150

DELEVN DELBOF
 -40.000 .000
 -40.000 .000
 28.000 28.000
 10.000 10.000

CONFIGURATION DESCRIPTION
 AVES 3.5-160 DA11B (B1D'4C507H3B)(V87E1B)(V5K5)
 AVES 3.5-160 DA11B (B1D'4C507H3B)(V87E1B)(V5K5)
 AVES 3.5-160 DA11B (B1D'4C507H3B)(V87E1B)(V5K5)
 AVES 3.5-160 DA11B (B1D'4C507H3B)(V87E1B)(V5K5)

DATA SET SYMBOL
 (FBK066)
 (FBK048)
 (FBK065)
 (FBK043)

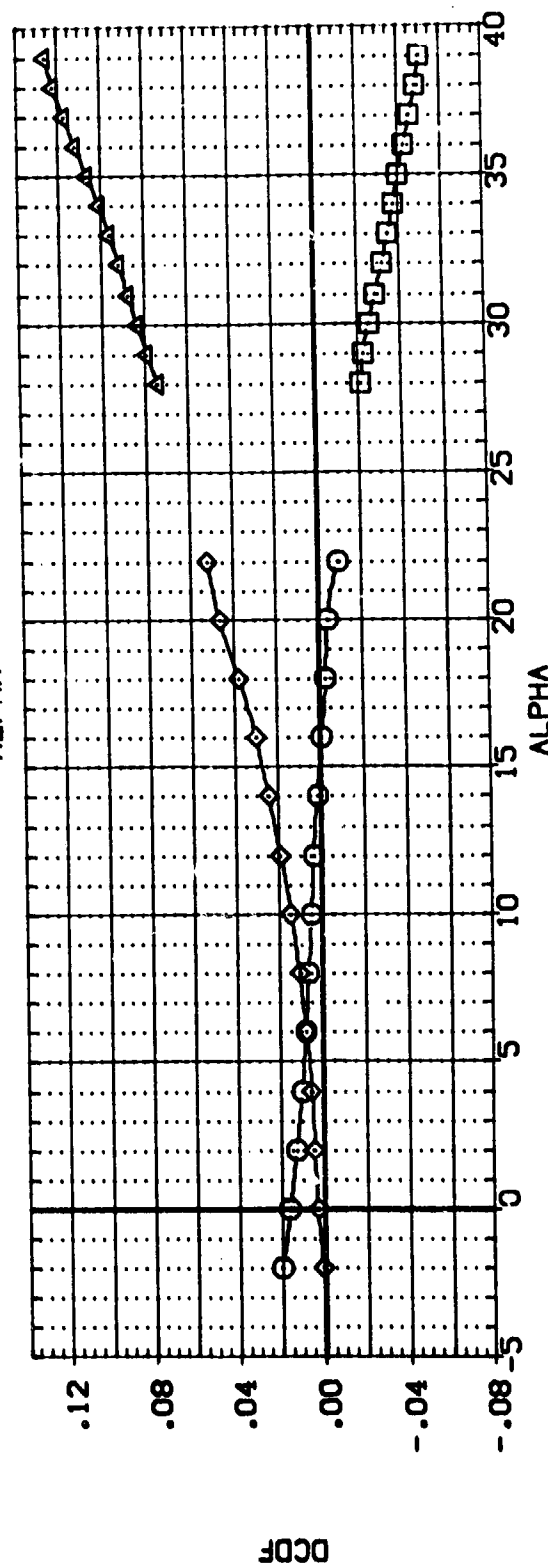
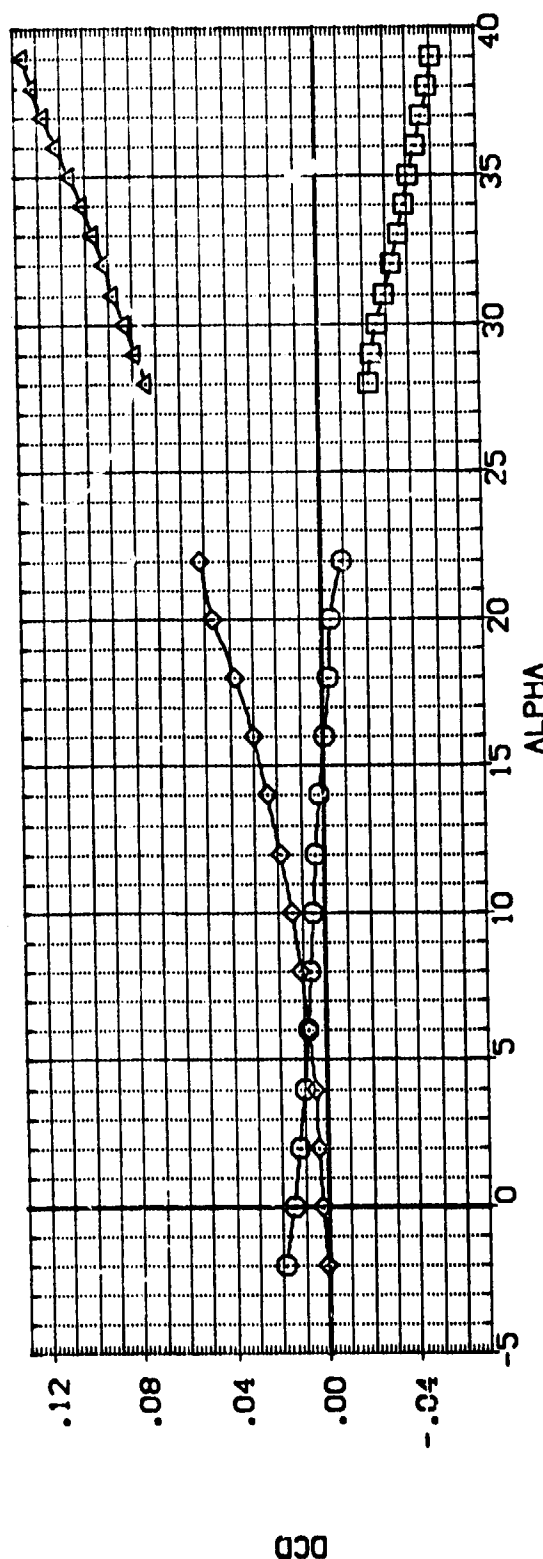


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF

(FBX066) AYES 3.5-160 DA118 (B)DF4C5D7GN8(V87E18)(V5K5) -40.000 .000

(FBX048) AYES 3.5-160 DA118 (B)DF4C5D7GN8(V87E18)(V5K5) -40.000 .000

(FBX065) AYES 3.5-160 DA118 (B)DF4C5D7GN8(V87E18)(V5K5) 10.000 28.000

(FBX049) AYES 3.5-160 DA118 (B)DF4C5D7GN8(V87E18)(V5K5) 10.000 28.000

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8100 IN.

BREF 936.6800 IN.

XMRP 1076.4800 IN.

YMRP 400.0000 IN.

ZMRP 400.0000 IN.

SCALE .0150

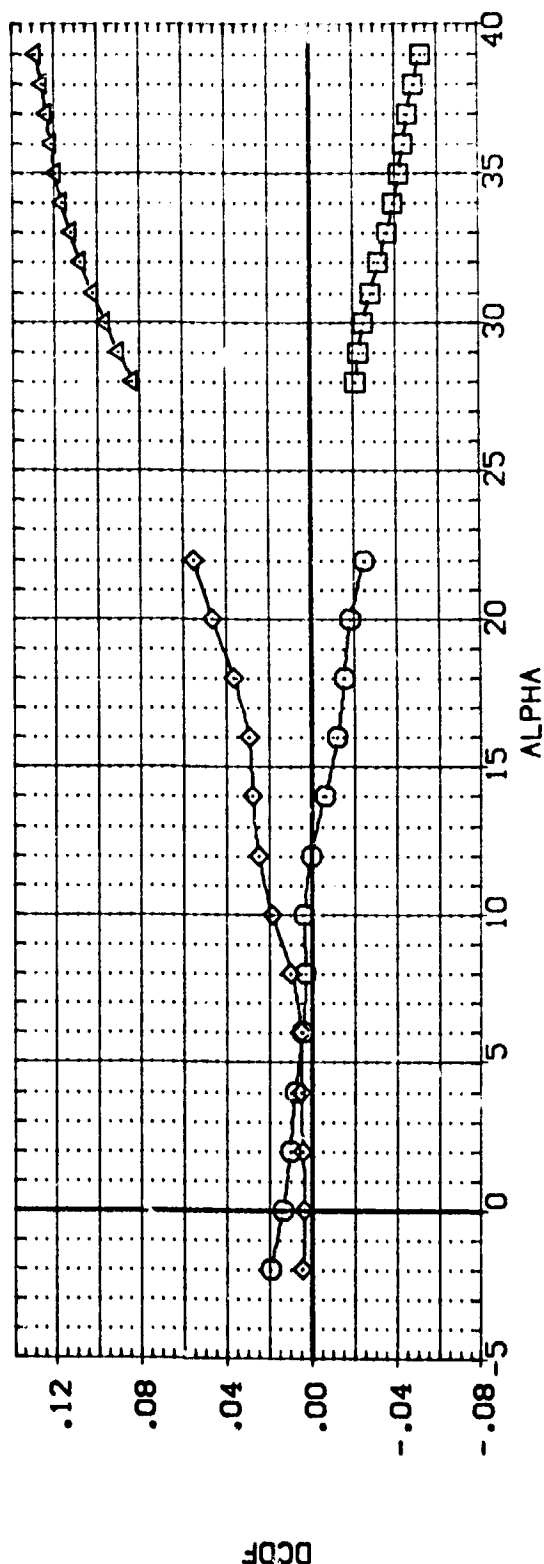
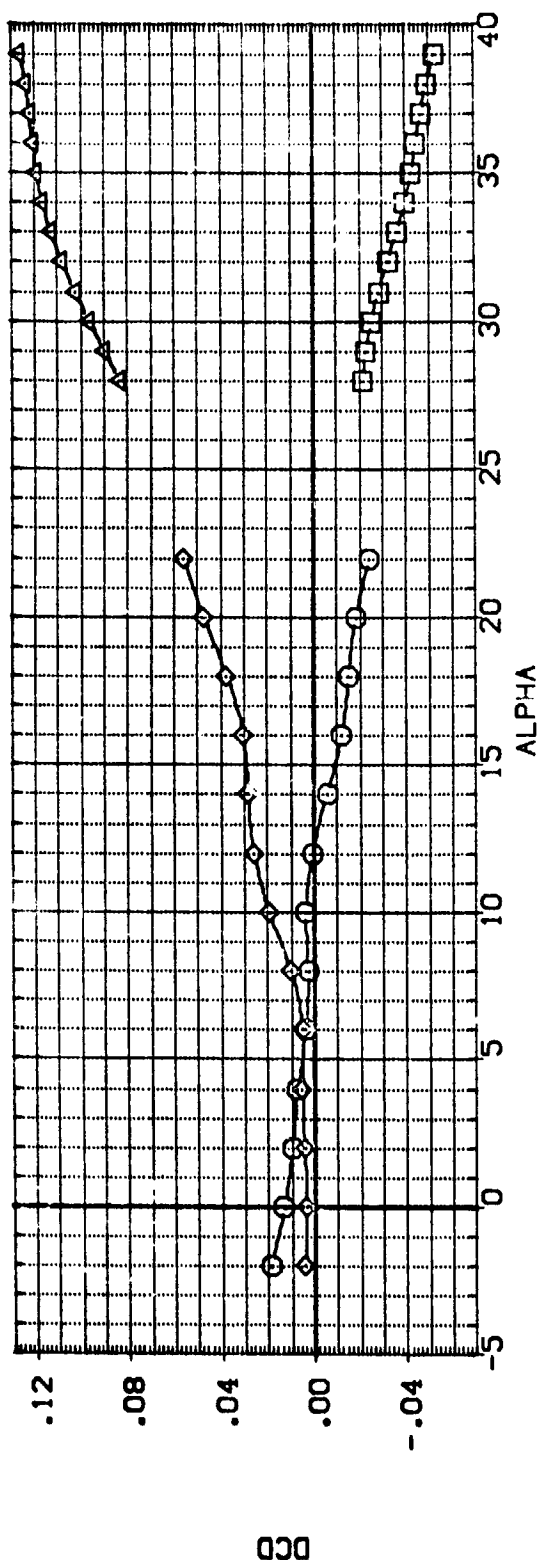


FIG. 2.0 INCREMENTAL ELEVEN EFFECTS

(B)MACH = 7.32

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FBX036)
(FBX048)
(FBX065)
(FBX049)

AMES 3.5-160 0A11B (B10F4C507M348)(V87E18)(V5RS)
AMES 3.5-160 0A11B (B10F4C507M348)(V87E18)(V5RS)
AMES 3.5-160 0A11B (B10F4C507M348)(V87E18)(V5RS)
AMES 3.5-160 0A11B (B10F4C507M348)(V87E18)(V5RS)

DELEW -40.000
DELEW -40.000
DELEW -40.000
DELEW 28.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.1600 IN.
XMRP 1076.1900 IN.
YMRP 1000.0000 IN.
ZMRP 400.0000 IN.
SCALE 10.150

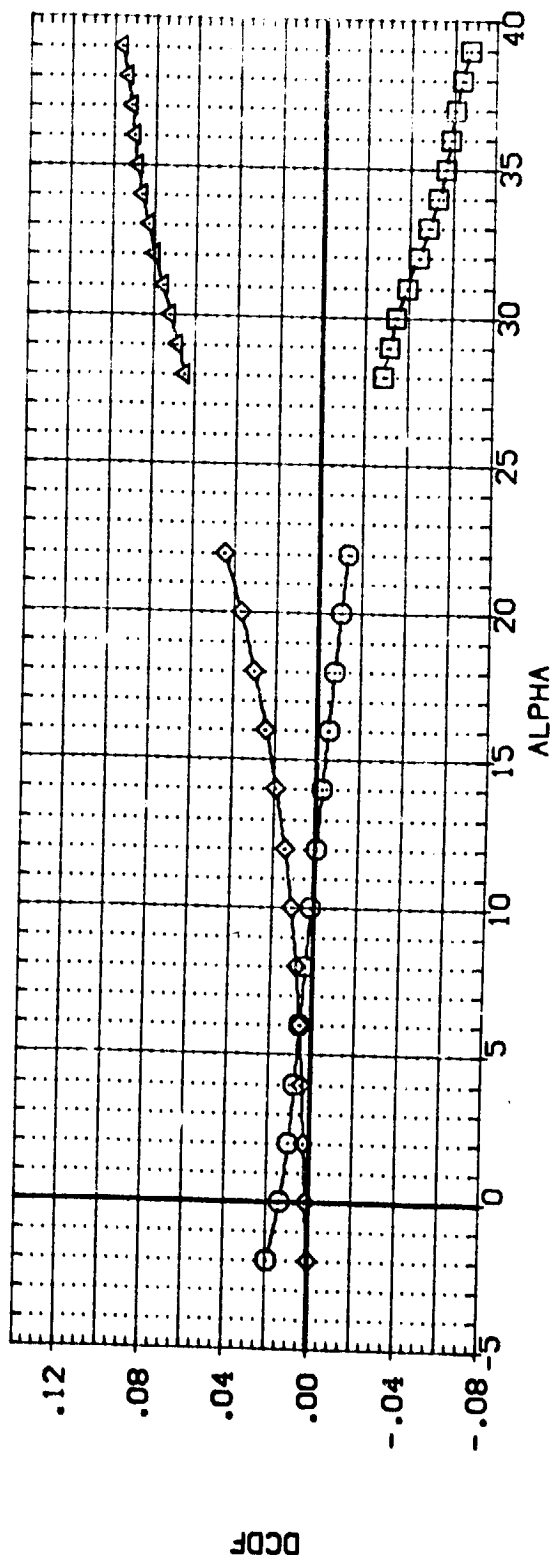
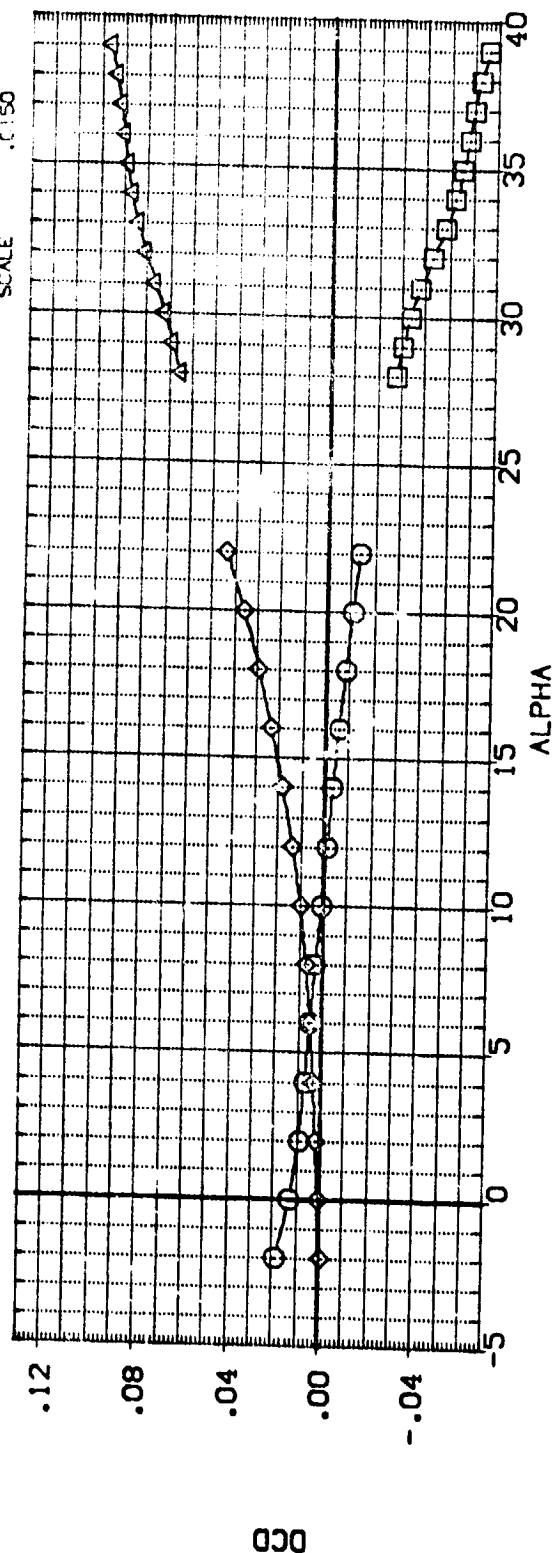


FIG. 2.0 INCREMENTAL ELEVEN EFFECTS

(C)MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELEVN	DELBOF	REFERENCE INFORMATION
(FBX066)	AMES 3.5-160 CA118 (B10F4C507N3N8)(V87E18)(V5K5)	-40.000	.000	SREF 2690.0000 50.FT.
(FBX048)	AMES 3.5-160 CA118 (B10F4C507N3N8)(V87E18)(V5K5)	-40.000	.000	LREF 474.8100 IN.
(FBX065)	AMES 3.5-160 CA118 (B10F4C507N3N8)(V87E18)(V5K5)	10.000	28.000	BREF 936.6800 IN.
(FBX049)	AMES 3.5-160 CA118 (B10F4C507N3N8)(V87E18)(V5K5)	10.000	28.000	XMRP 1076.4800 IN.
				YMRP .0000 IN.
				ZMRP 400.0000 IN.
				SCALE .0150

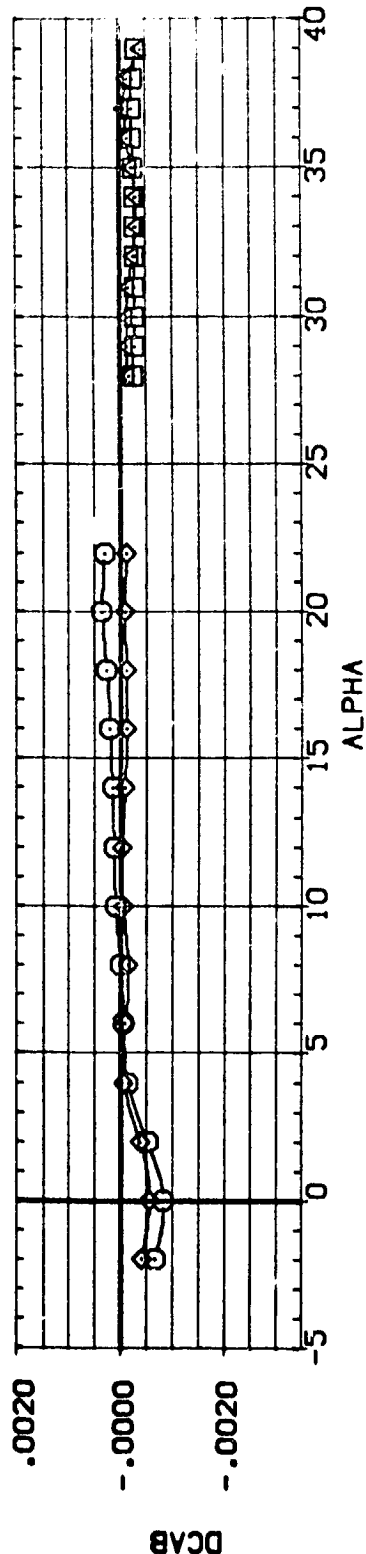
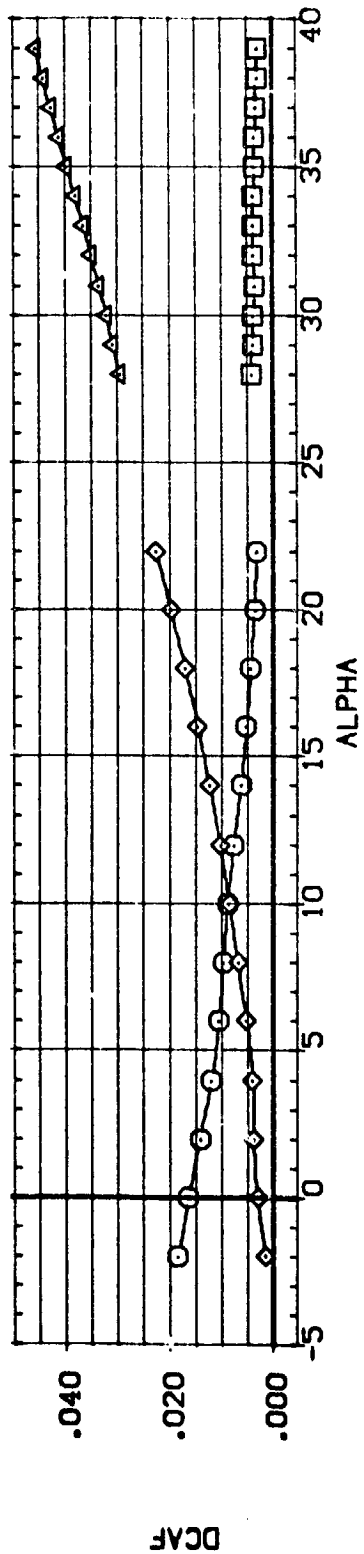
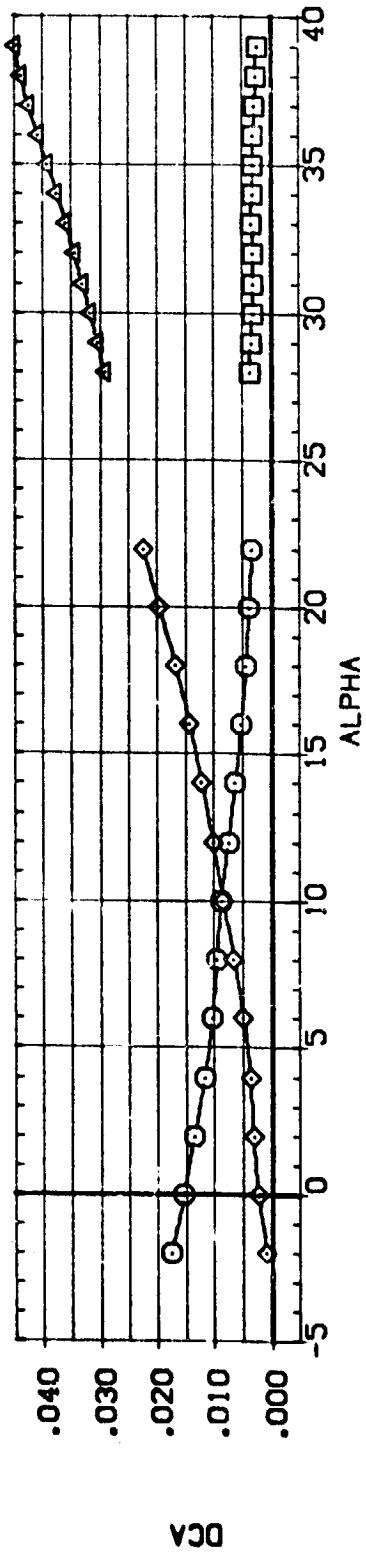


FIG. 2.0 INCREMENTAL ELEVN EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		DELEVN		DELBOF	
(FBX066)	□	AMES 3.5-160	GA11B (B10F4C507M3-8) (V87E18) (V5RS)	-40.000	.000		
(FBX048)	○	AMES 3.5-160	GA11B (B10F4C507M3-8) (V87E18) (V5RS)	-40.000	.000		
(FBX065)	△	AMES 3.5-160	GA11B (B10F4C507M3-8) (V87E18) (V5RS)	10.000	28.000		
(FBX049)	×	AMES 3.5-160	GA11B (B10F4C507M3-8) (V87E18) (V5RS)	10.000	28.000		

REFERENCE INFORMATION	
SREF	2650.0000
UREF	474.8100
ZREF	935.1550
XMRP	1076.1800
YMRP	1000.0000
ZMRP	1000.0000
SCALE	.0150

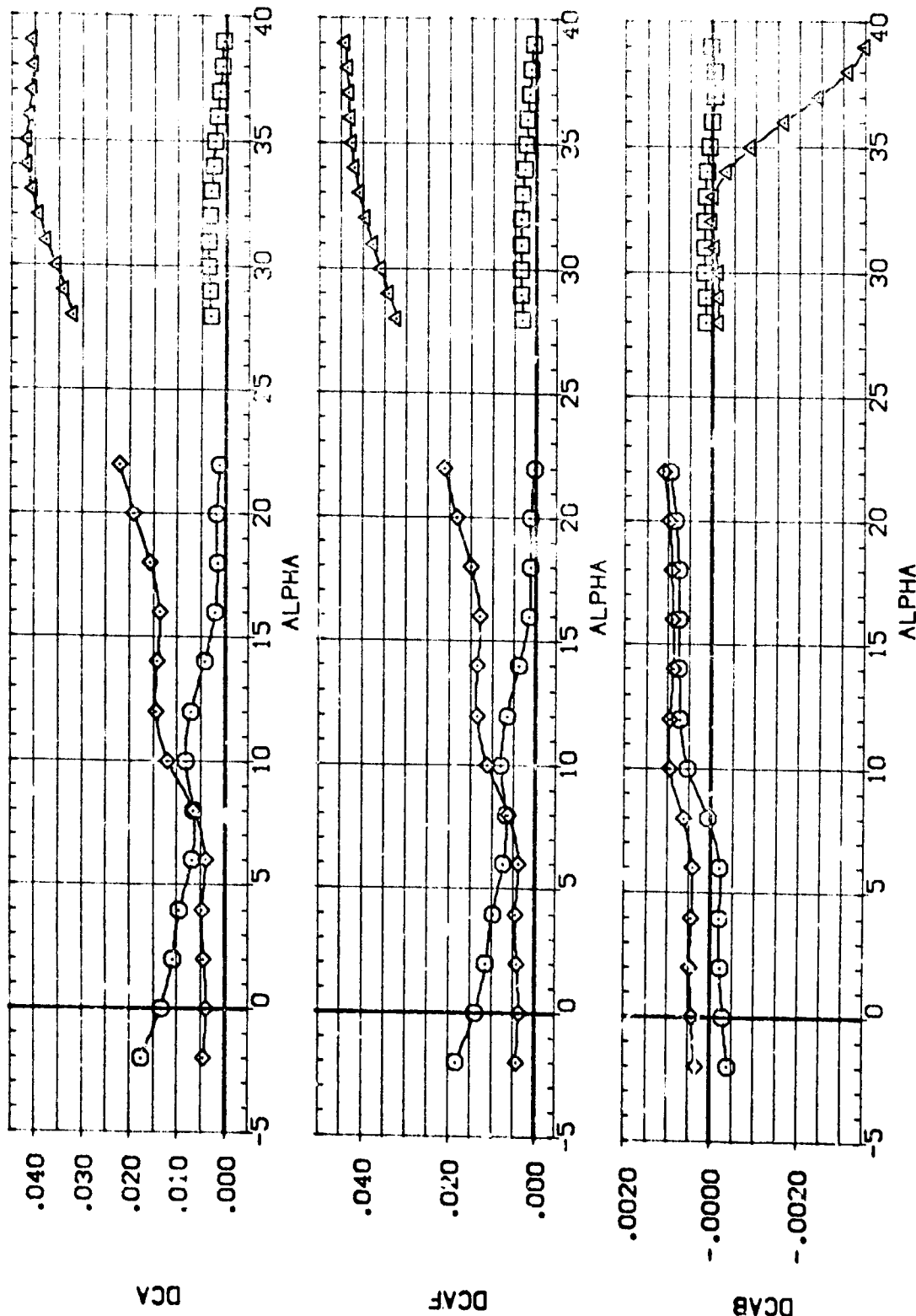


FIG. 2.D INCREMENTAL ELEVON EFFECTS

(B)MACH = 7.32

DATA SET SYMBOL: (FBX065) (FBX048) (FBX065) (FBX049)

CONFIGURATION DESCRIPTION: AYES 3.5-160 OA 1B (810F4C507M348) (V87E18) (V5RS) AYES 3.5-160 OA 1B (810F4C507M348) (V87E18) (V5RS) AYES 3.5-160 OA 1B (810F4C507M348) (V87E18) (V5RS) AYES 3.5-160 OA 1B (810F4C507M348) (V87E18) (V5RS)

DELEVN: -40.000 -40.000 10.000 10.000

DELBOF: .000 .000 28.000 28.000

REFERENCE INFORMATION: SREF 2690.0000 SO.1 LREF 474.8100 IN. BREF 936.6900 IN. XMRP 1076.4800 IN. YMRP 400.0000 IN. ZMRP 400.0000 IN. SCALE .0150

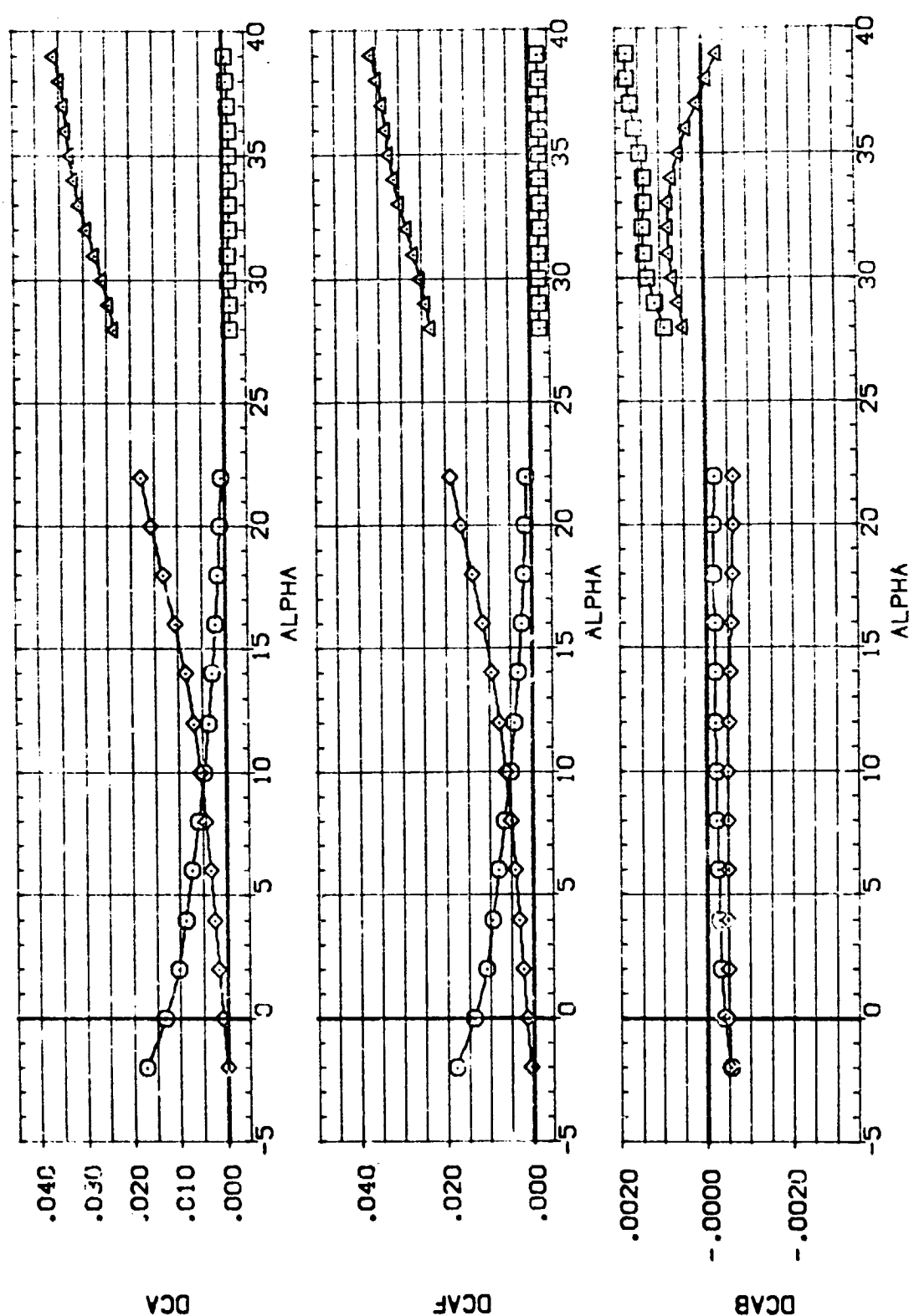


FIG. 2.0 INCREMENTAL ELEVON EFFECTS

(C)MACH = 10.29

DATA SET SYMBOL
 (23X066)
 (23X048)
 (23X065)
 (23X049)

CONFIGURATION DESCRIPTION
 AVES 3.5-160 CA11B (B10F4C507M3N8)(V87E18)(V5K5)
 AVES 3.5-160 CA11B (B10F4C507M3N8)(V87E18)(V5K5)
 AVES 3.5-160 CA11B (B10F4C507M3N8)(V87E18)(V5K5)

DELEVN
 -40.000
 -40.000
 28.000
 10.000
 10.000

DELROF
 .000
 .000
 .000
 .000
 .000

REFERENCE INFORMATION
 SHAF 26.00 0.000
 LATE 4.04 8.100
 BREF 2.05 8.300
 XREF 10.6 0.000
 YREF 0.000
 ZREF 400.0000
 SCALE .0150

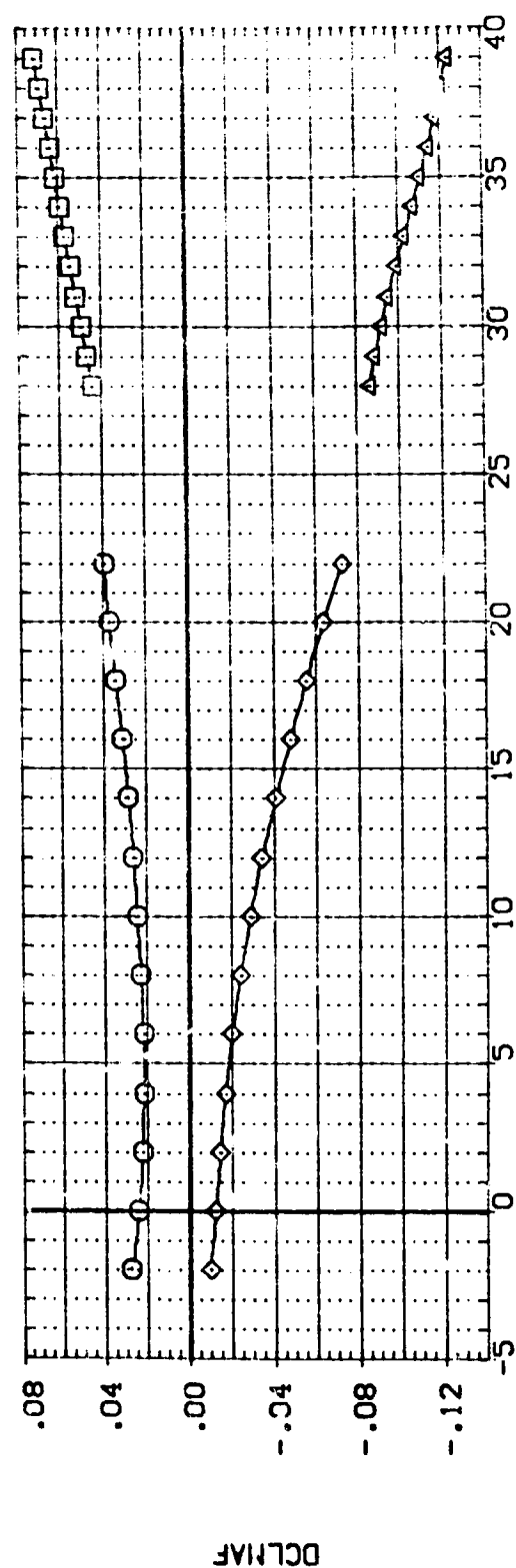
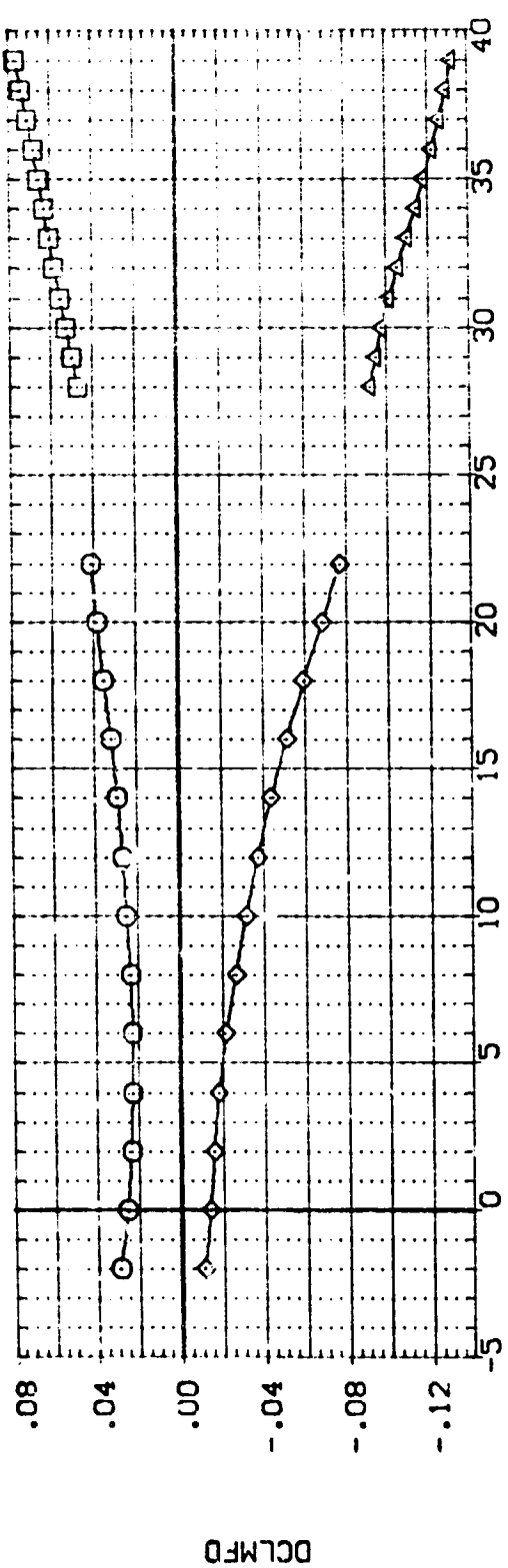


FIG. 2.0 INCREMENTAL ELEVN EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELEVN	DELEBOF	REFERENCE INFORMATION
(FBX066)	AVES 3.5-160 CA11B (B10F4CS07H3-8)(V87E18)(V5R5)	.000	.000	SREF 2690.0000 50.FT.
(FBX048)	AVES 3.5-160 CA11B (B10F4CS07H3-8)(V87E18)(V5R5)	-40.000	.000	LREF 474.8100 IN.
(FBX065)	AVES 3.5-160 CA11B (B10F4CS07H3-8)(V87E18)(V5R5)	-40.000	.000	BREF 936.6800 IN.
(FBX049)	AVES 3.5-160 CA11B (B10F4CS07H3-8)(V87E18)(V5R5)	10.000	28.000	XMRP 1076.4800 IN.
		10.000	28.000	YMRP .0000 IN.
		10.000	28.000	ZMRP 400.0000 IN.
				SCALE .0150

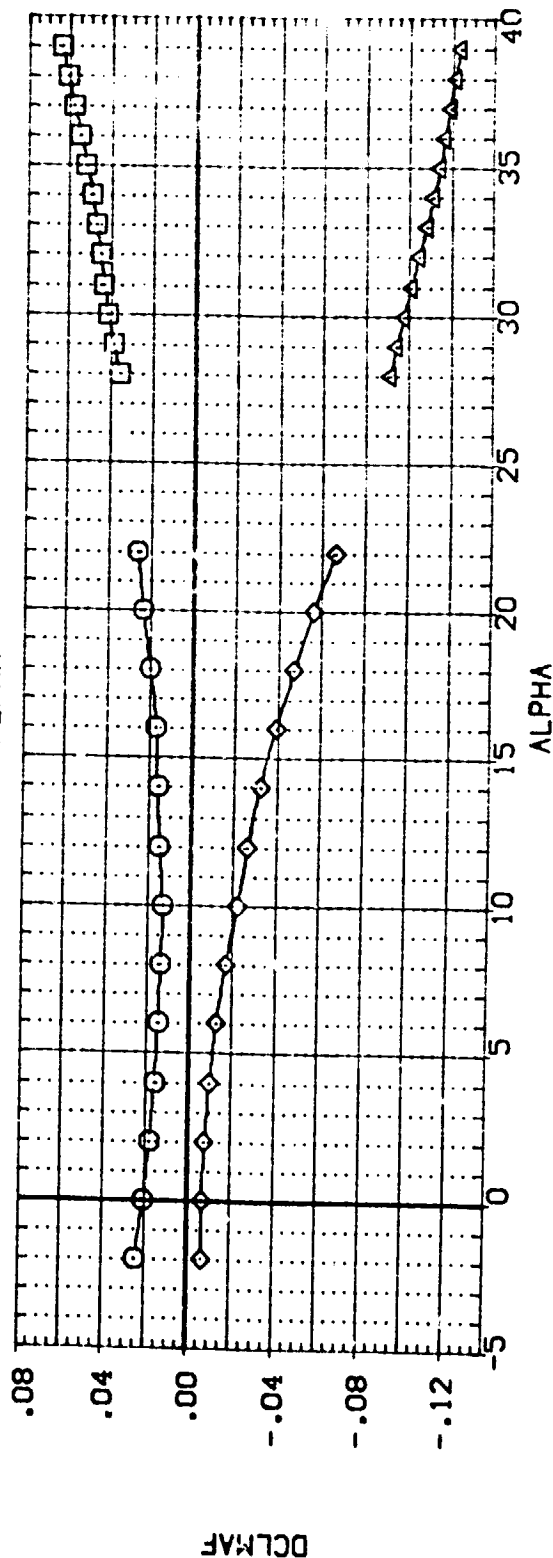
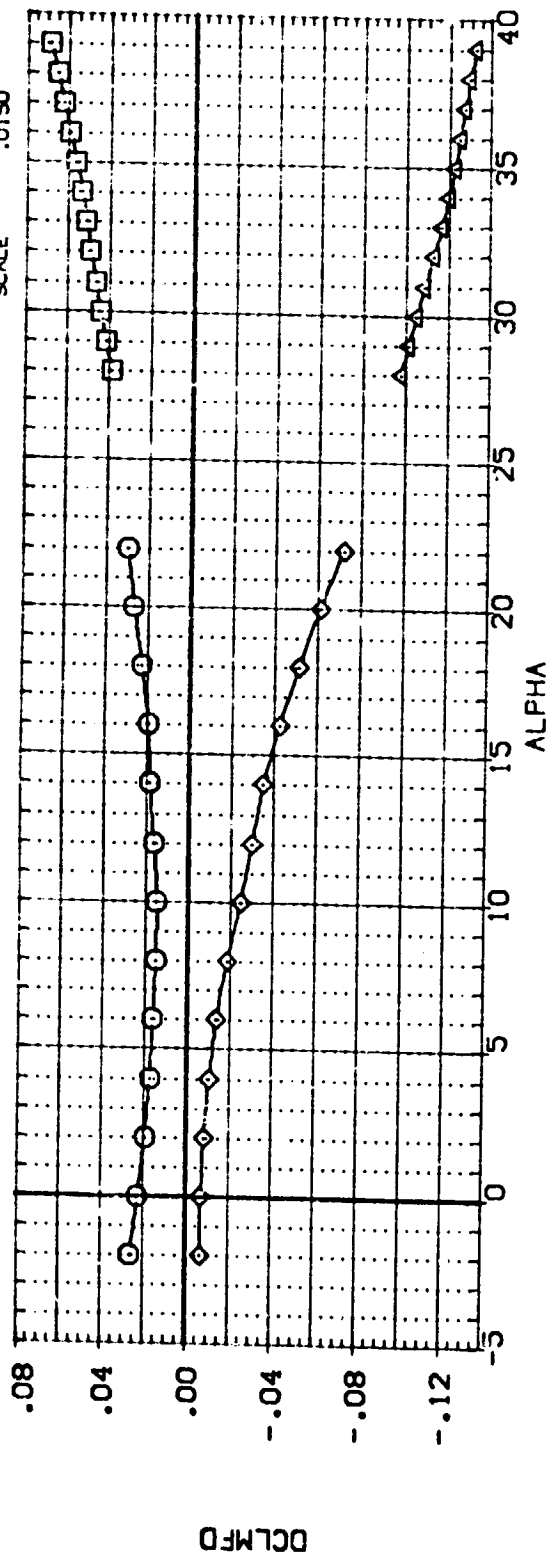


FIG. 2.D INCREMENTAL ELEVEN EFFECTS
(B)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELEVN	DELROF
(FBX065)	APES 3.5-160 CA11B (B10F4C507N3B)(V87E18)(V5K5)	-40.000	.000
(FBX048)	APES 3.5-160 CA11B (B10F4C507N3B)(V87E18)(V5K5)	-40.000	.000
(FBX065)	APES 3.5-160 CA11B (B10F4C507N3B)(V87E18)(V5K5)	10.000	28.000
(FBX049)	APES 3.5-160 CA11B (B10F4C507N3B)(V87E18)(V5K5)	10.000	28.000

REFERENCE INFORMATION	SO.P.T.
SREF 2690.0000	N.
LREF 474.8100	N.
RREF 930.1800	N.
KREF 1016.4800	N.
ZREF .0000	N.
ZREF 400.0000	N.
SCALE .0150	

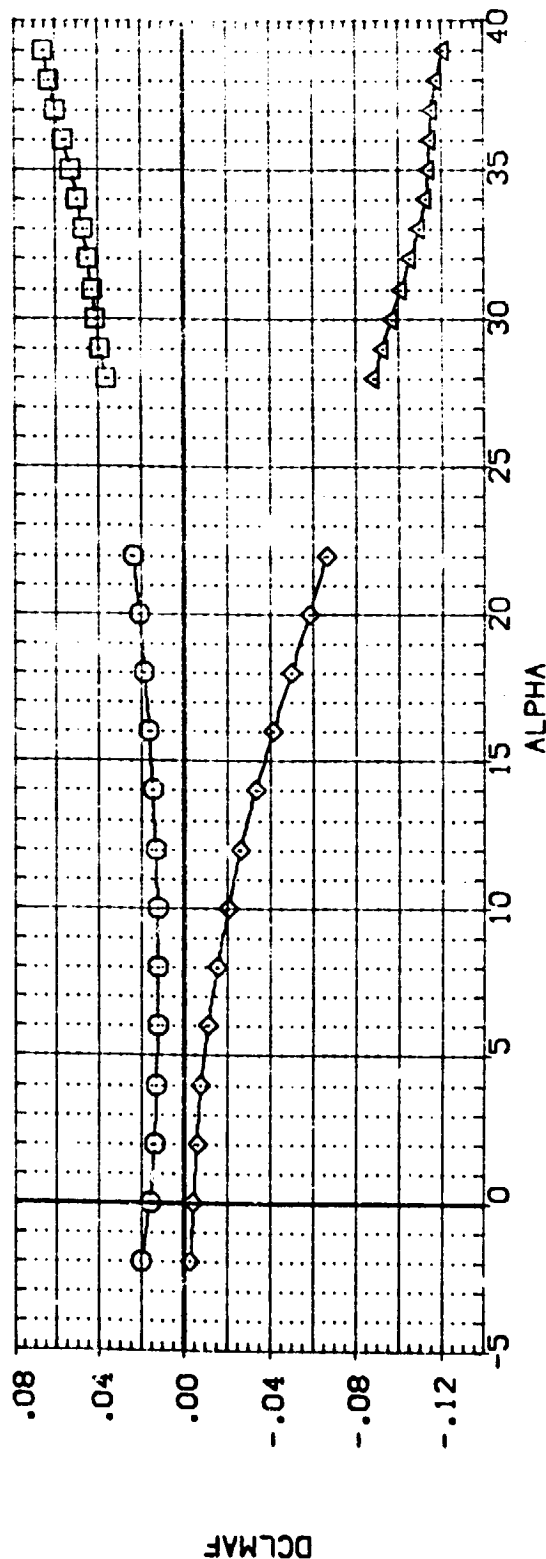
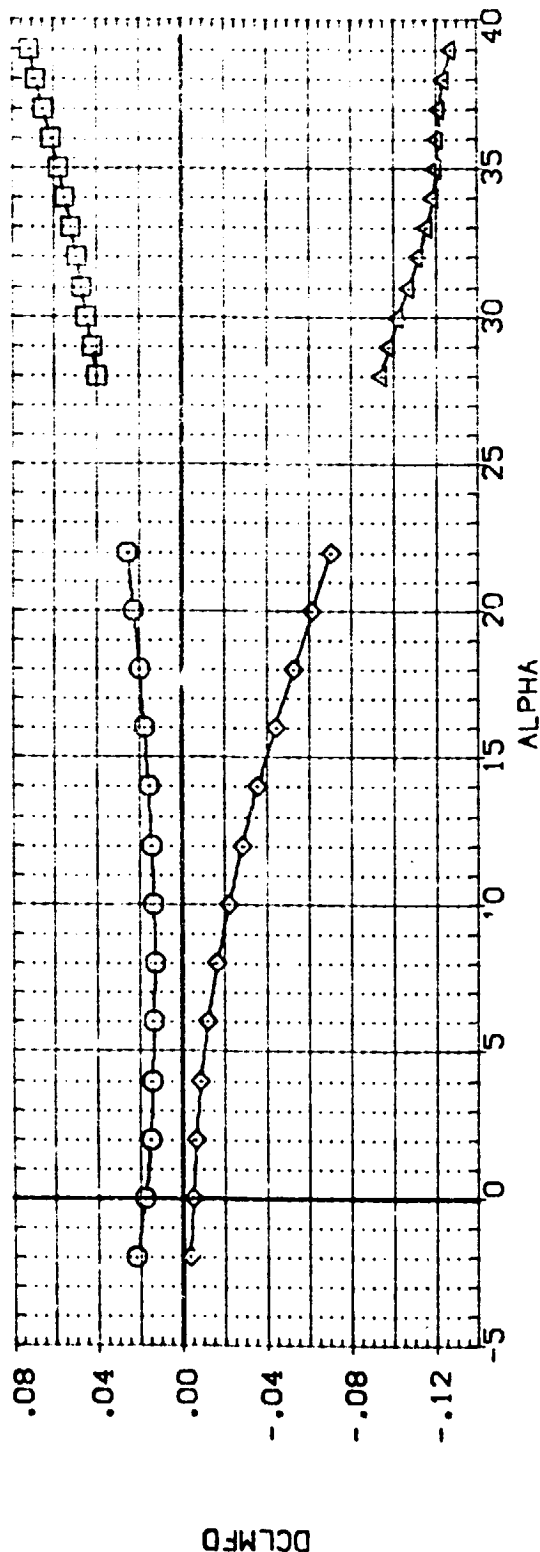


FIG. 2.0 INCREMENTAL ELEVN EFFECTS

(C)MACH = 10.29



DATA SET SYMBOL: 000056
CONFIGURATION DESCRIPTION: AVE'S 3.5-160 CALIB (810F4C507K308)(V87E18)(V5R5)
DELEVN: -40.000
DELBOF: .000
REFERENCE INFORMATION:
SREF: 2650.0000 SQ.FT.
LREF: 474.8100 IN.
BREF: 936.6900 IN.
XMRP: 1076.4800 IN.
YMRP: .0000 IN.
ZMRP: 400.0000 IN.
SCALE: .0150

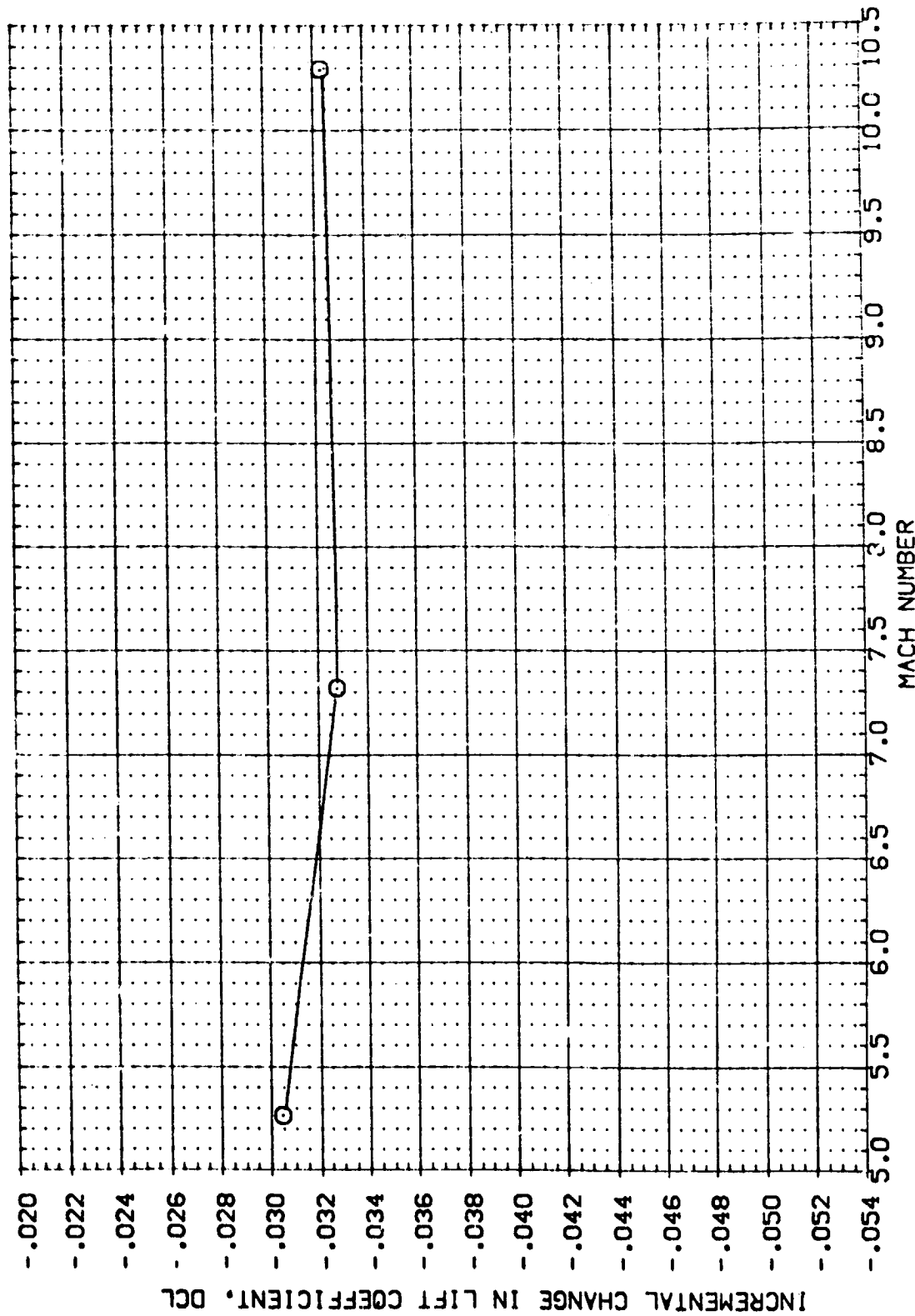


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = .00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF
 (53X066) O APES 3.5-160 0A11B (B10F4C507H3N8)(V87E18)(VSR5) -40.000 .000

REFERENCE INFORMATION
 CREF 2630 0000 SQ.FT.
 LREF 474 8100 IN.
 BREF 576 5800 IN.
 XREF 1073.4800 IN.
 YREF .0000 N.
 ZREF 400.0000 N.
 SCALE .0150

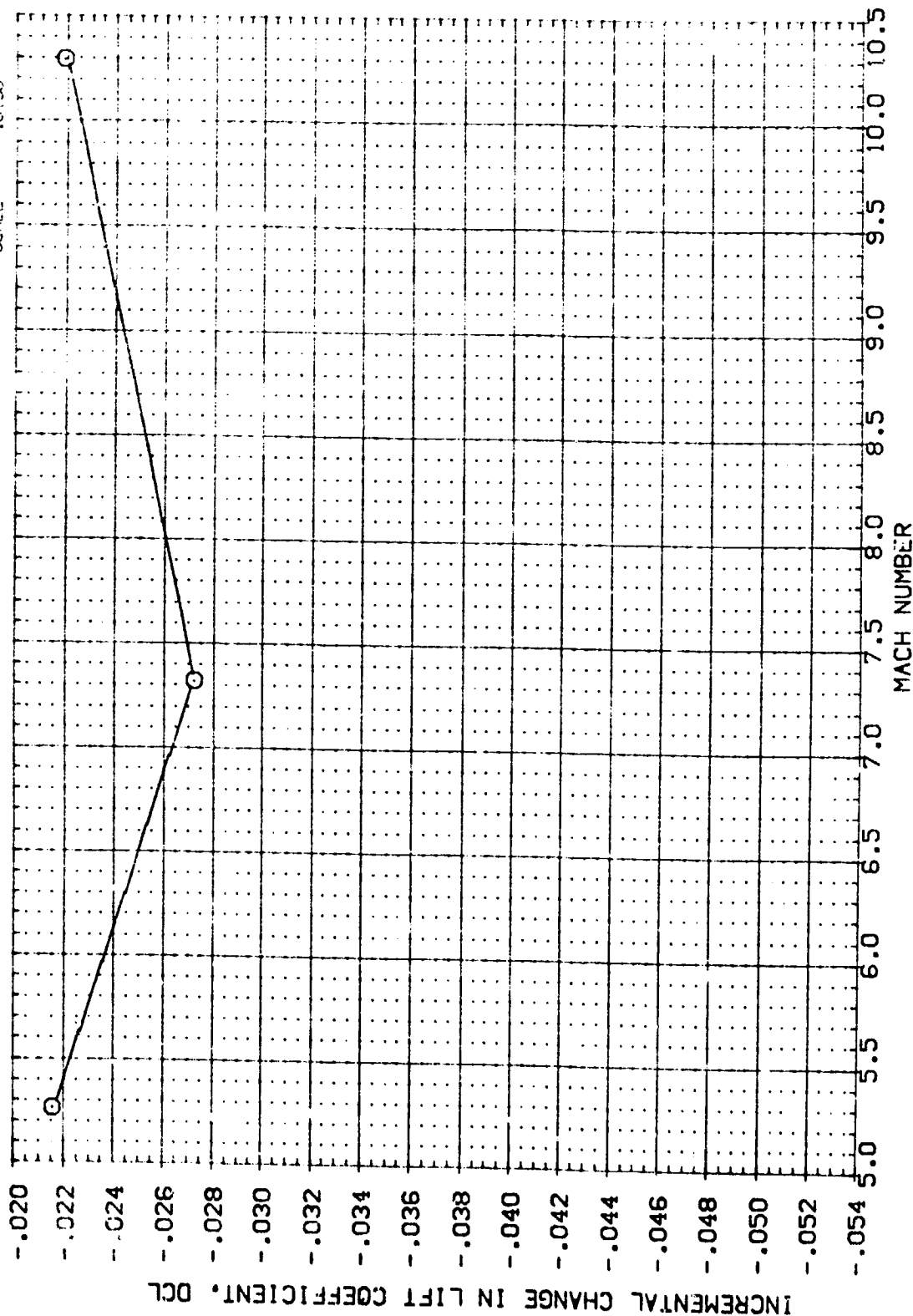


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (B) ALPHA = 10.00



REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 -40.000 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (330056) ○ ARES 3.5-160 0A11B (B10F4C507H3N8)(V87E1S)(V59S)

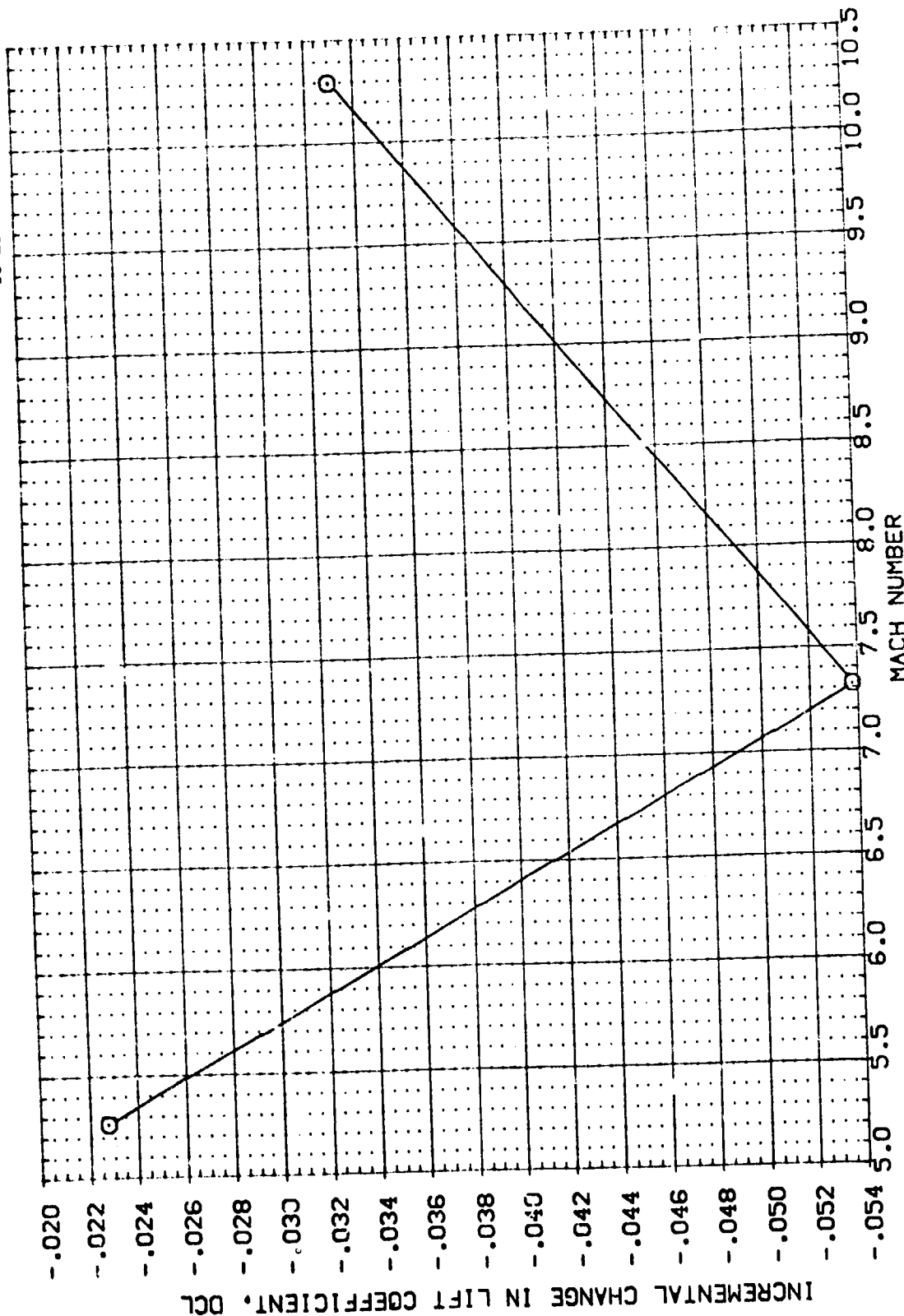


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 20.00

REFERENCE INFORMATION
 SREF 2850.0000 SQ.FT.
 LREF 474.8100 IN.
 NREF 936.6400 IN.
 XREF 1076.4800 IN.
 YREF 0.0000 IN.
 ZREF 400.0000 IN.
 SCALE 0.150

DELEVN DELEBOF
 -40.000 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (G24066) ○ APES 3.5-150 CA118 (B10F4CSD74346)(V87E18)(V58S)

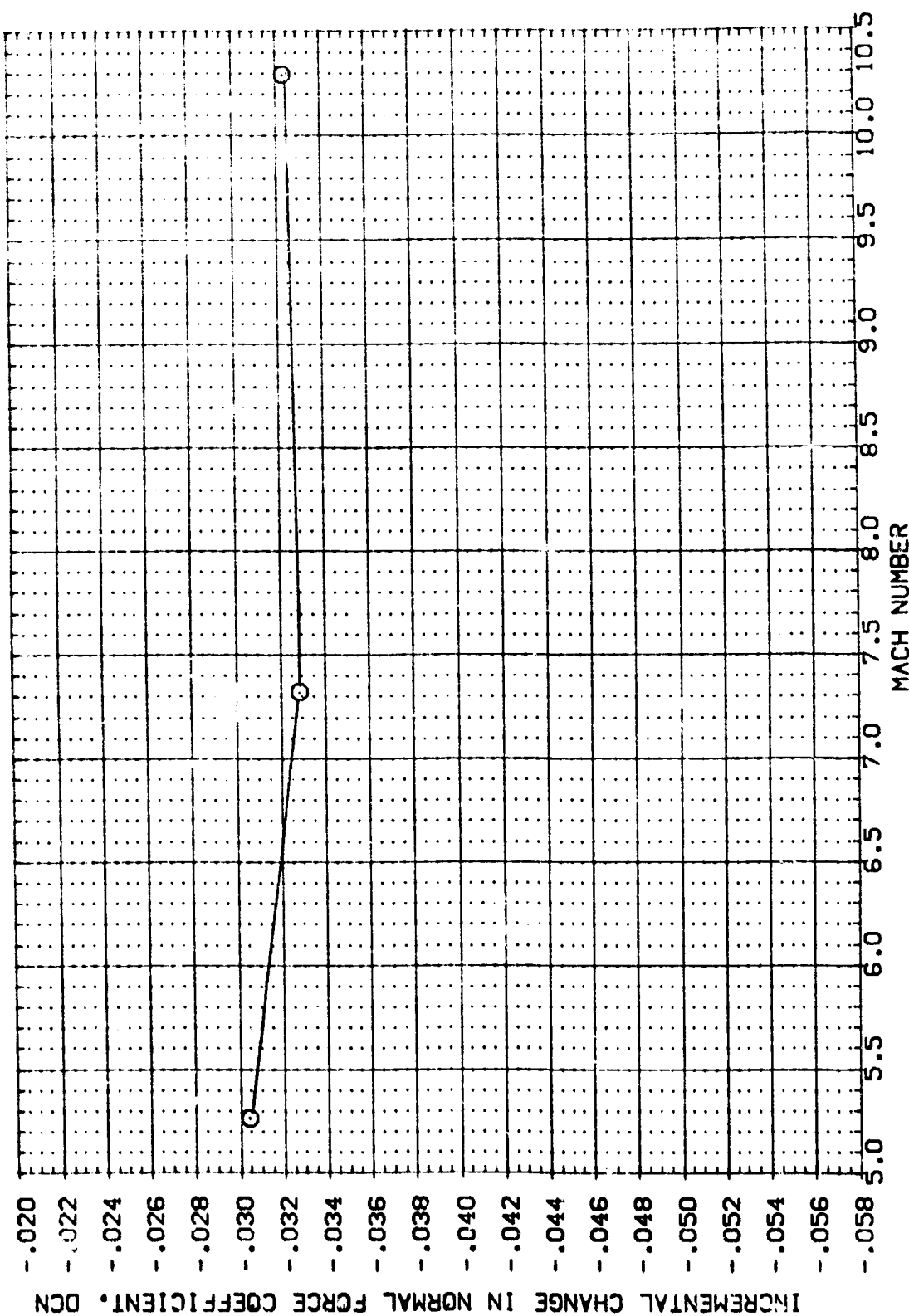
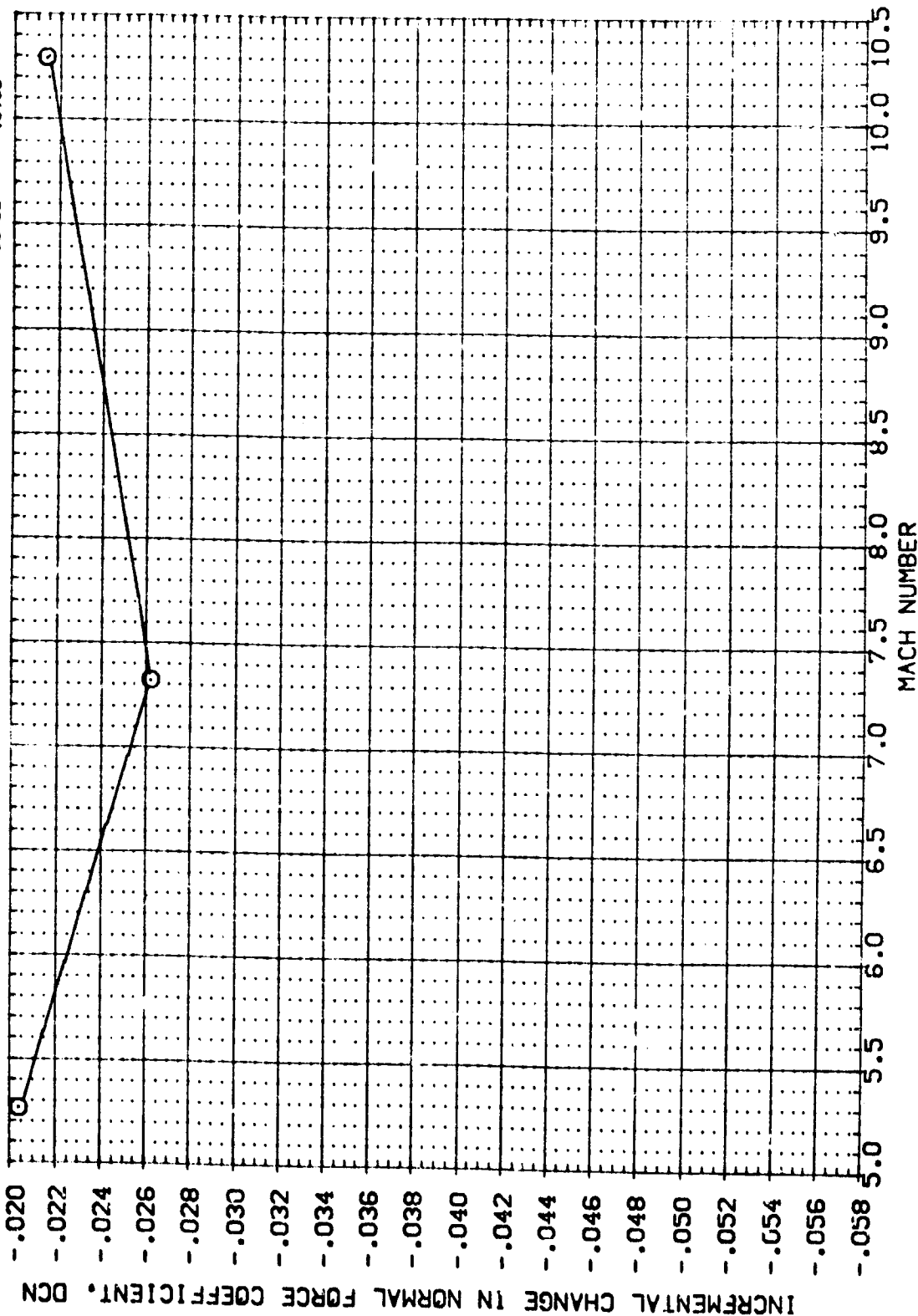


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = .00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF

(GBX066) ○ AYES 3.5-160 0A11B (B10F4CS07K3N8)(V87E18)(VSRS) -40.000 .000



REFERENCE INFORMATION

SREF 2690.0000 SQ.FT.

LREF 474.8100 IN.

BREF 936.6800 IN.

XPRP 1076.1800 IN.

YPRP .0000 IN.

ZPRP 400.0000 IN.

SCALE .0150

FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(BJALPHA = 10.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELEW	DELEBOF
0 (GEX056)	AMES 3.5-160 CALIB (BI04C50TH04B)(V07E13)(V5R5)	-40,000	,000

REFERENCE INFORMATION	
SREF	7692.0000 SQ.FT.
LREF	474.9100 IN.
BREF	976.6900 IN.
XMRP	1076.7800 IN.
YMRP	0000 IN.
ZMRP	400.0000 IN.
SCALE	0150

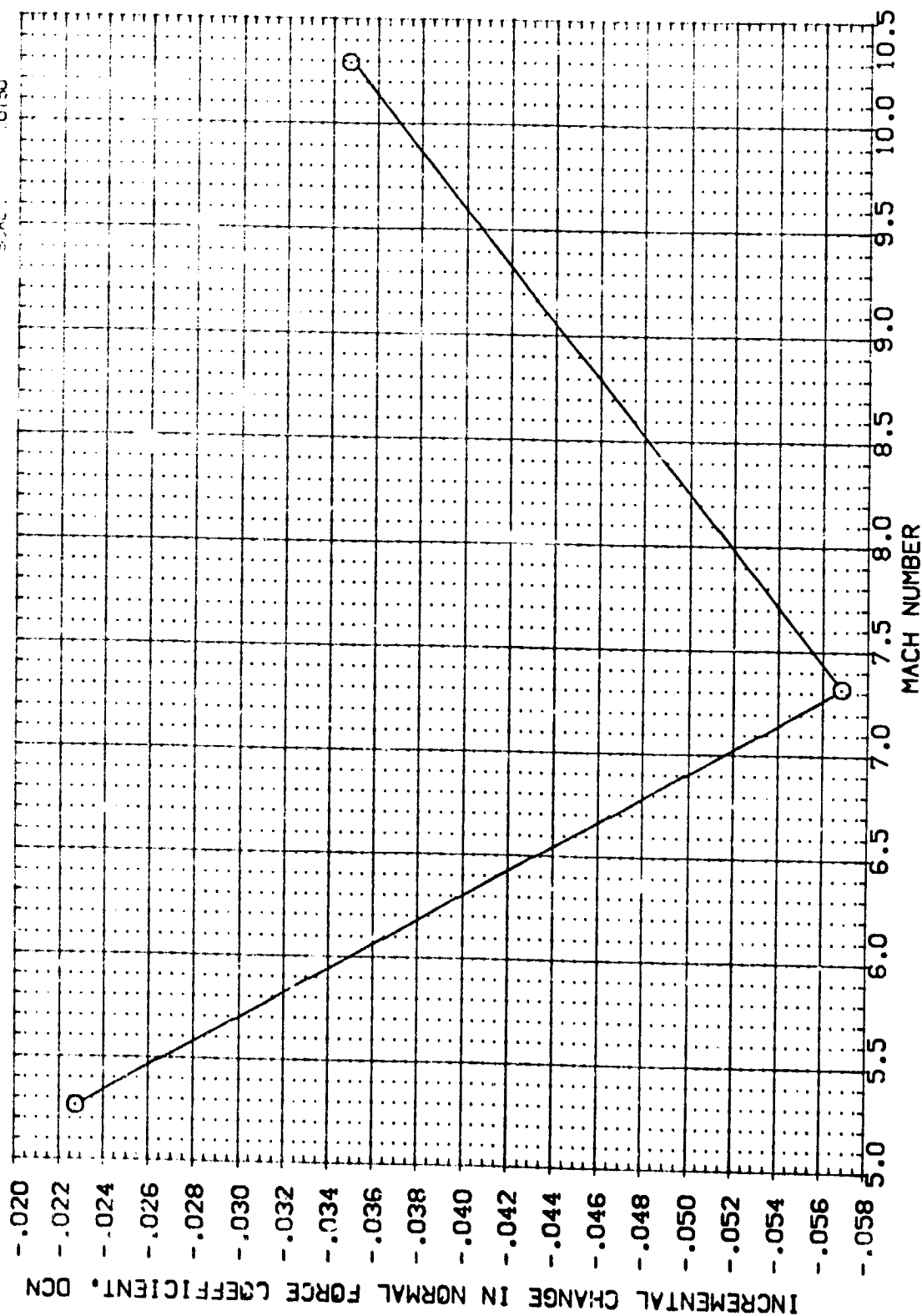


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER

$$\{C\}^{\text{ALPHA}} = 20.00$$

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DATA SET SYMBOL (G80066) ○
 CONFIGURATION DESCRIPTION AVES 3.5-160 CALIB (B10F4C)
 DELEVN DELBOF
 7-8)(V87E18)(VSR5) -40.000 .000

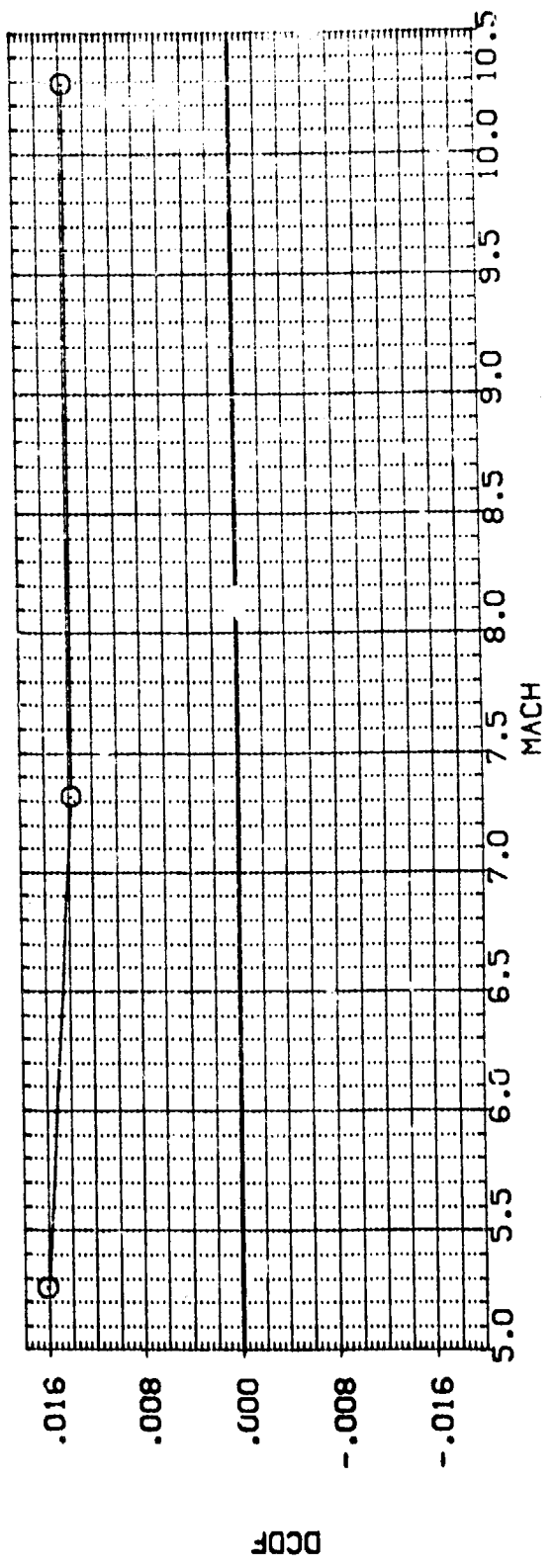
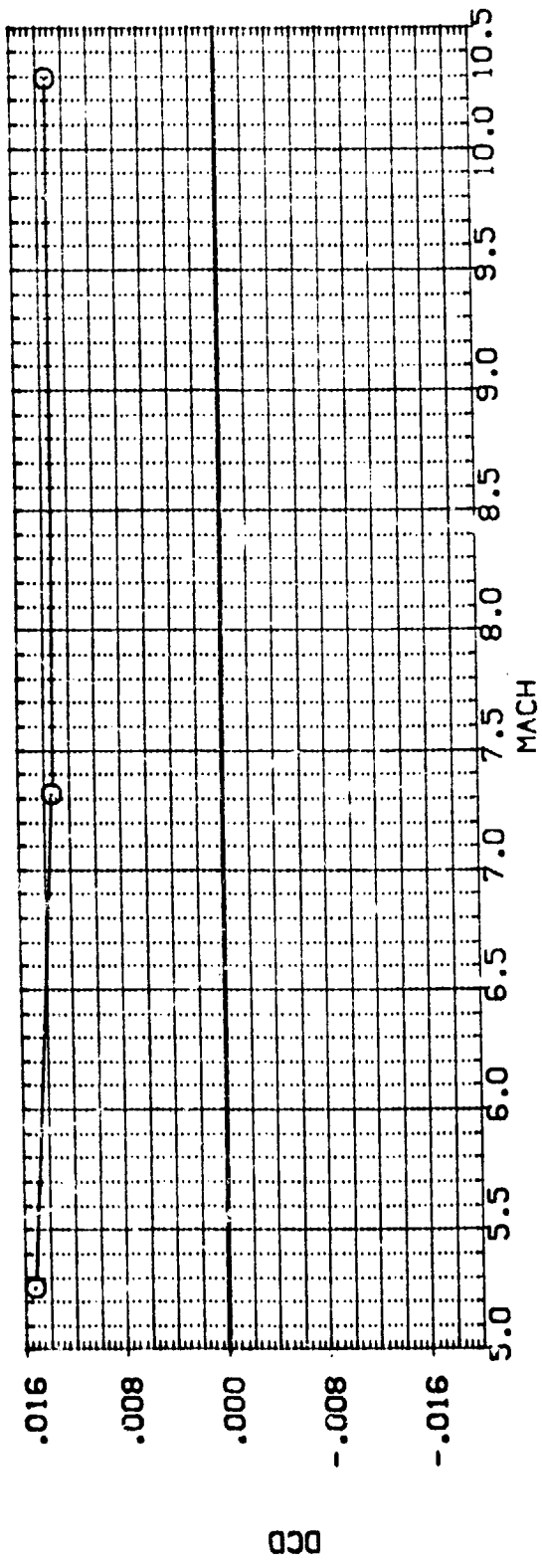


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = .00

DATA SET SYMBOL: 0
 CONFIGURATION DESCRIPTION: ARLS 3.5-150 8AL1.B (B10F4C507M348)(V87E1B)(V5R5) DELBOF .000
 DELEVN -40,000

REFERENCE INFORMATION
 SREF 2090.0000 50.FT.
 LREF 974.8100 IN.
 BREF 535.9800 IN.
 YREF 1076.4800 IN.
 YREF 0.0000 IN.
 ZREF 400.0000 IN.
 SCALE 0.0150

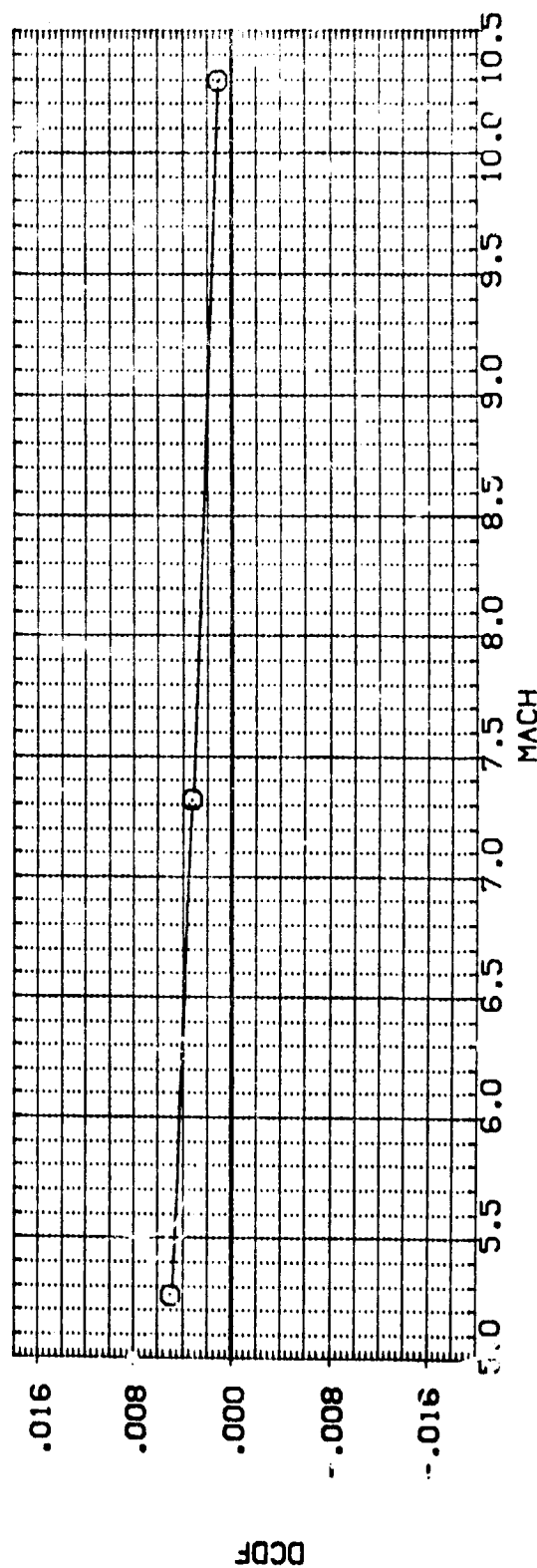
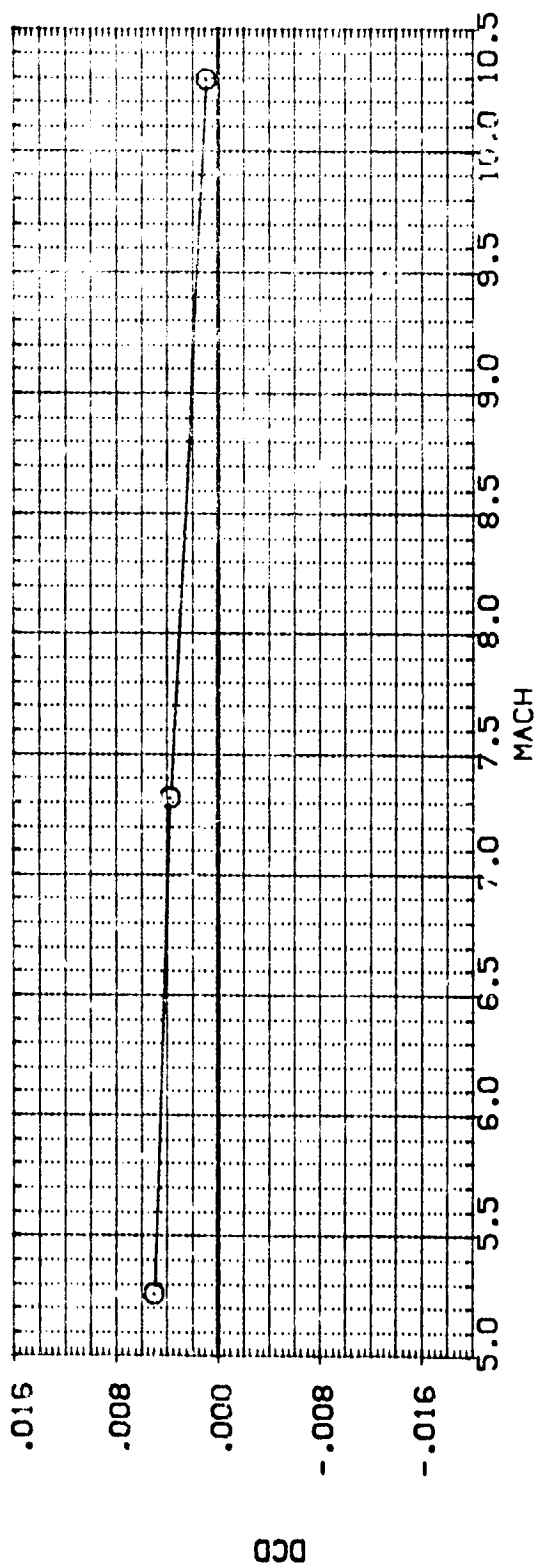


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 10.00

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (GBX066) O AXES 3.5-160 CA11B (B10F4C507M348)(V87E18)(V59R5) DELBOF
 DELEVN -40.000 .000

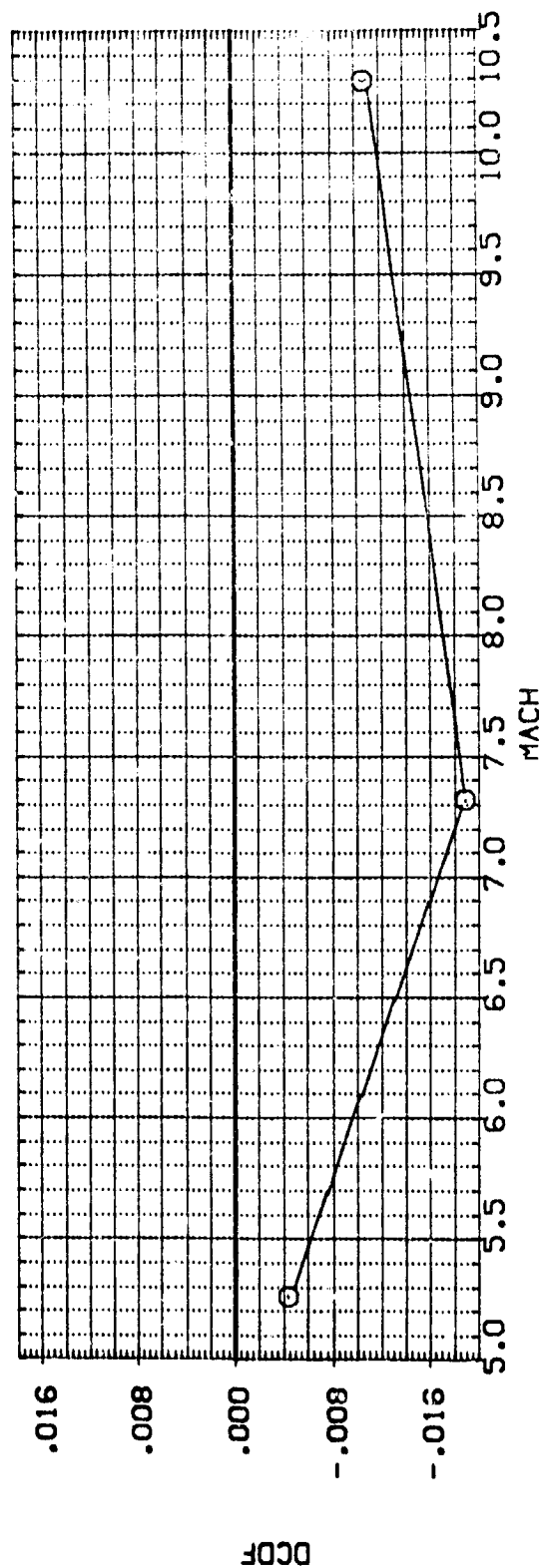
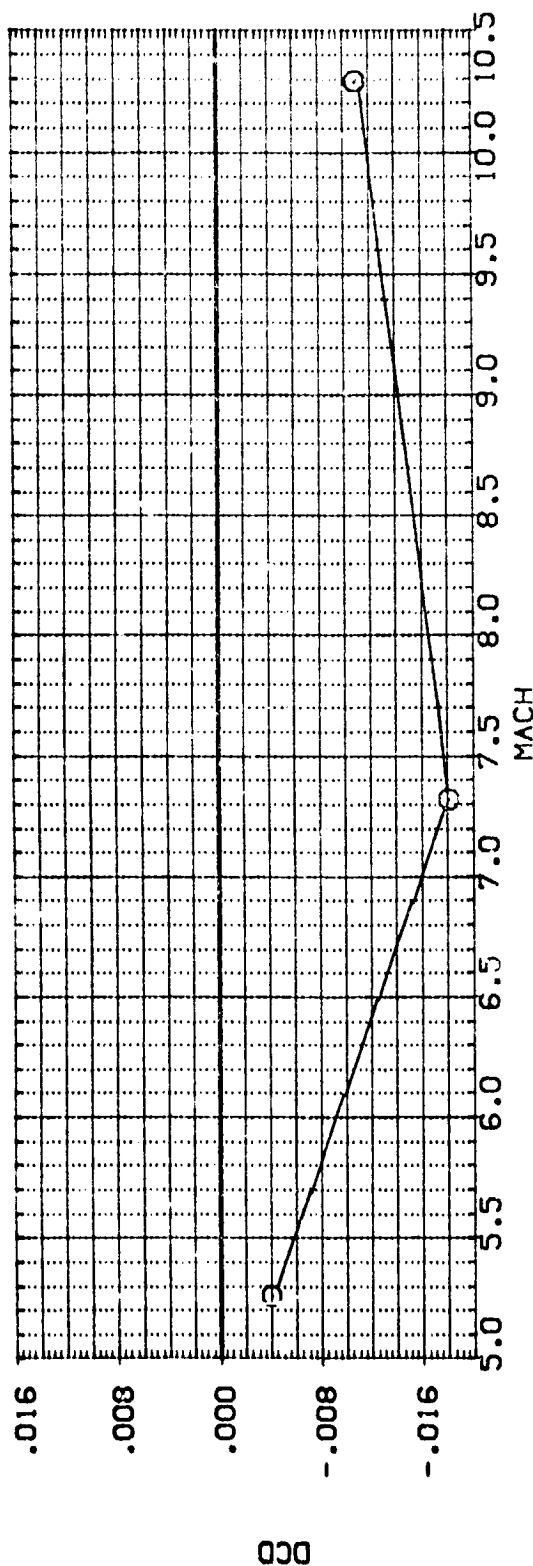


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C)ALPHA = 20.00

DATA SET SYMBOL: 0390651
 CONFIGURATION DESCRIPTION: AMCS 3.5-160 CALIB (910F4C507K5.8)(V87E18)(V59S)

DELEVN: -40,000
 DELBOF: .000

REFERENCE INFORMATION
 SIZE: 2089.0000 92.0 FT.
 WING: 974.8100
 REF: 975.8900
 PRP: 1076.4800
 VREF: 100.0000
 ZRRP: 400.0000
 SCALE: 0.1150

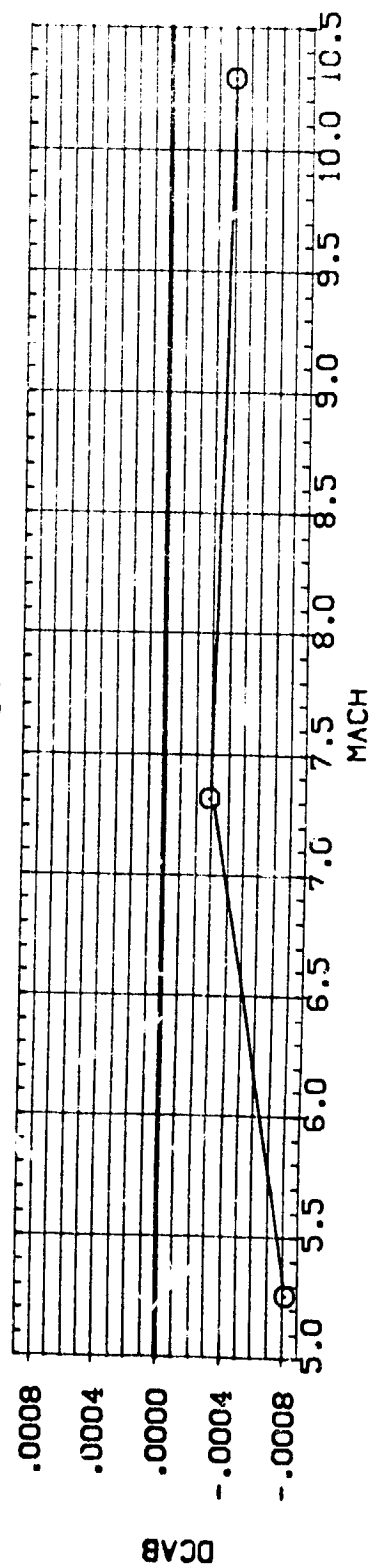
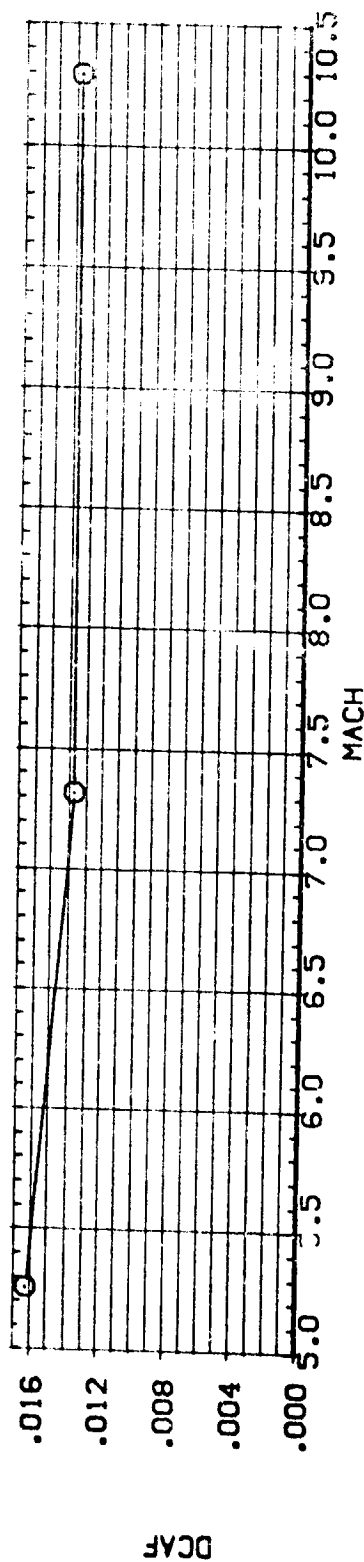
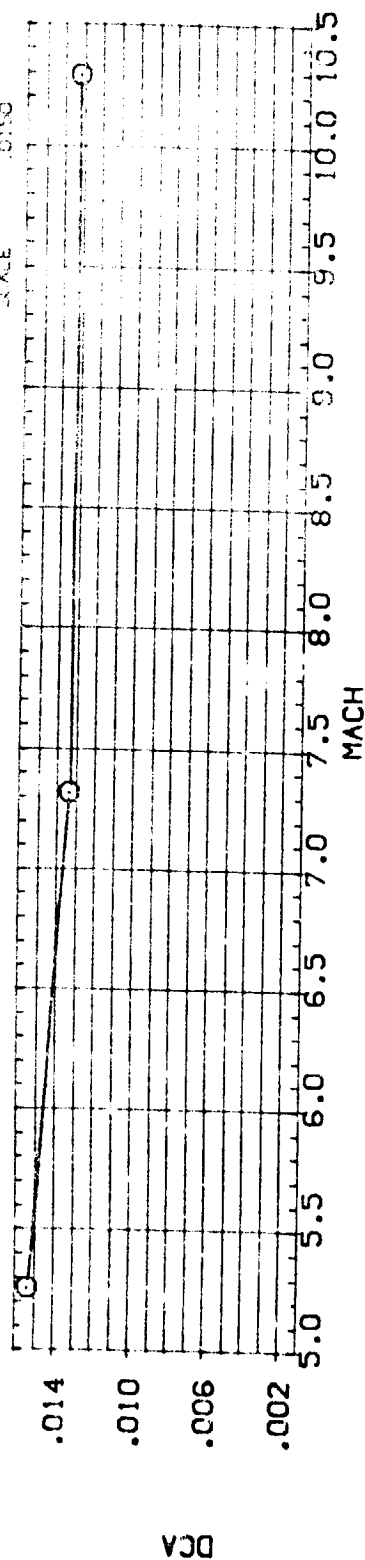


FIG. 2.E INCREMENTAL ELEVN EFFECTS WITH MACH NUMBER

(A) ALPHA = .00



23

DATA SET SYMBOL (GBROSS) ○
 CONFIGURATION DESCRIPTION
 AVES 3.5-160 0A118 (B10F4CSD7K3N9)(V87E18)(V5K5)
 DELEVN DEL80F
 -40.000 .000

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XREF 1076.4800 IN.
 YREF .0000 IN.
 ZREF 400.0000 IN.
 SCALE .0150

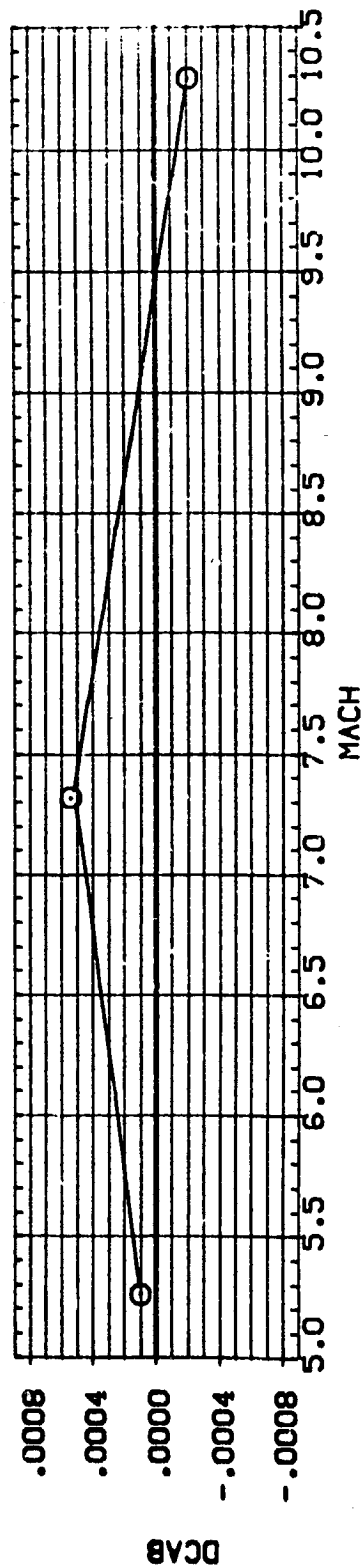
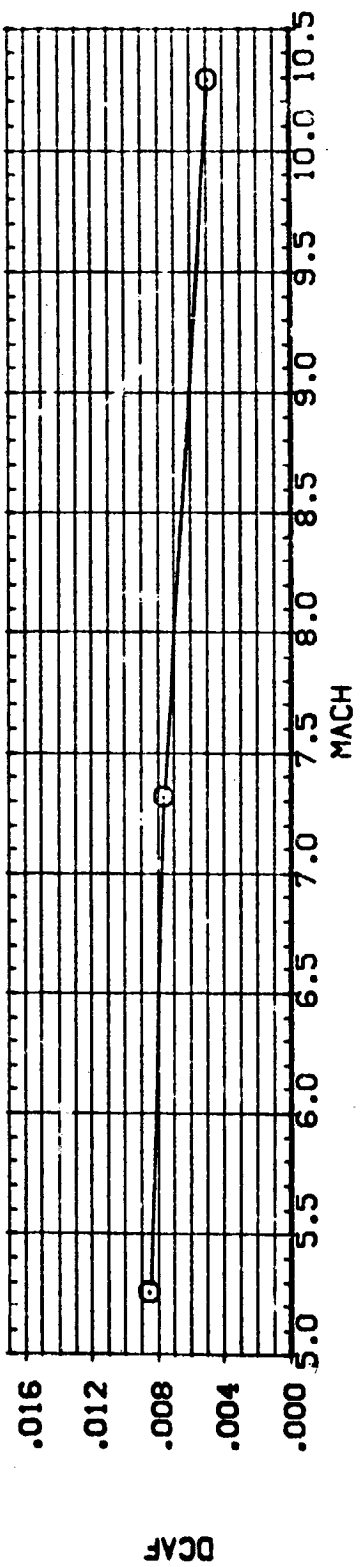
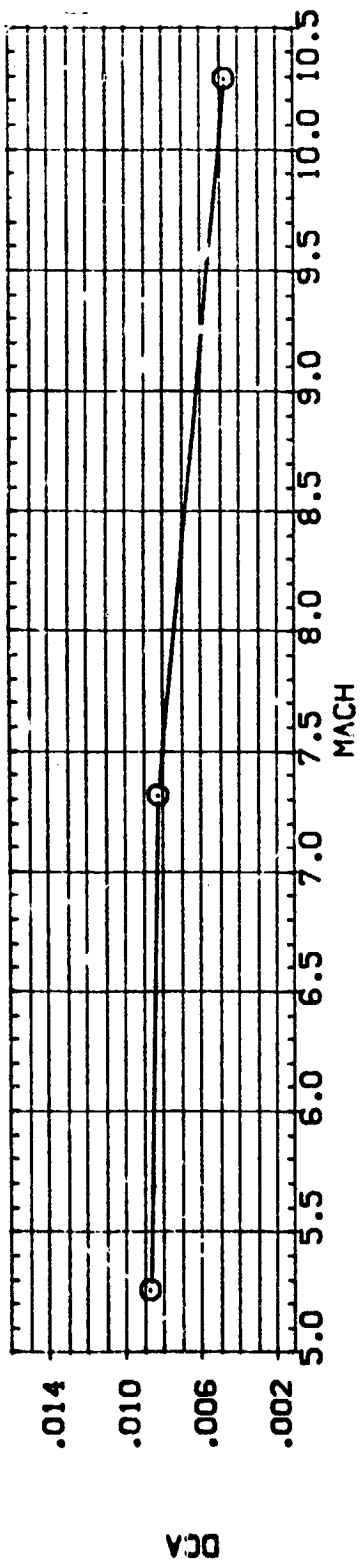


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 10.00

REFERENCE INFORMATION
 SREF 2690.0000 52. FT.
 LREF 474.8100 N:
 BREF 936.6800 N:
 XMRP 1076.1800 N:
 YMRP .0000 N:
 ZMRP 100.0000 N:
 SCALE .0150

DATA SET SYMBOL ○ ARES 3.5-160 0A11B (BIDF4C507G4B)(V67E18)(V5RS) DELBOF
 (080066) DELEW -40.000 .000

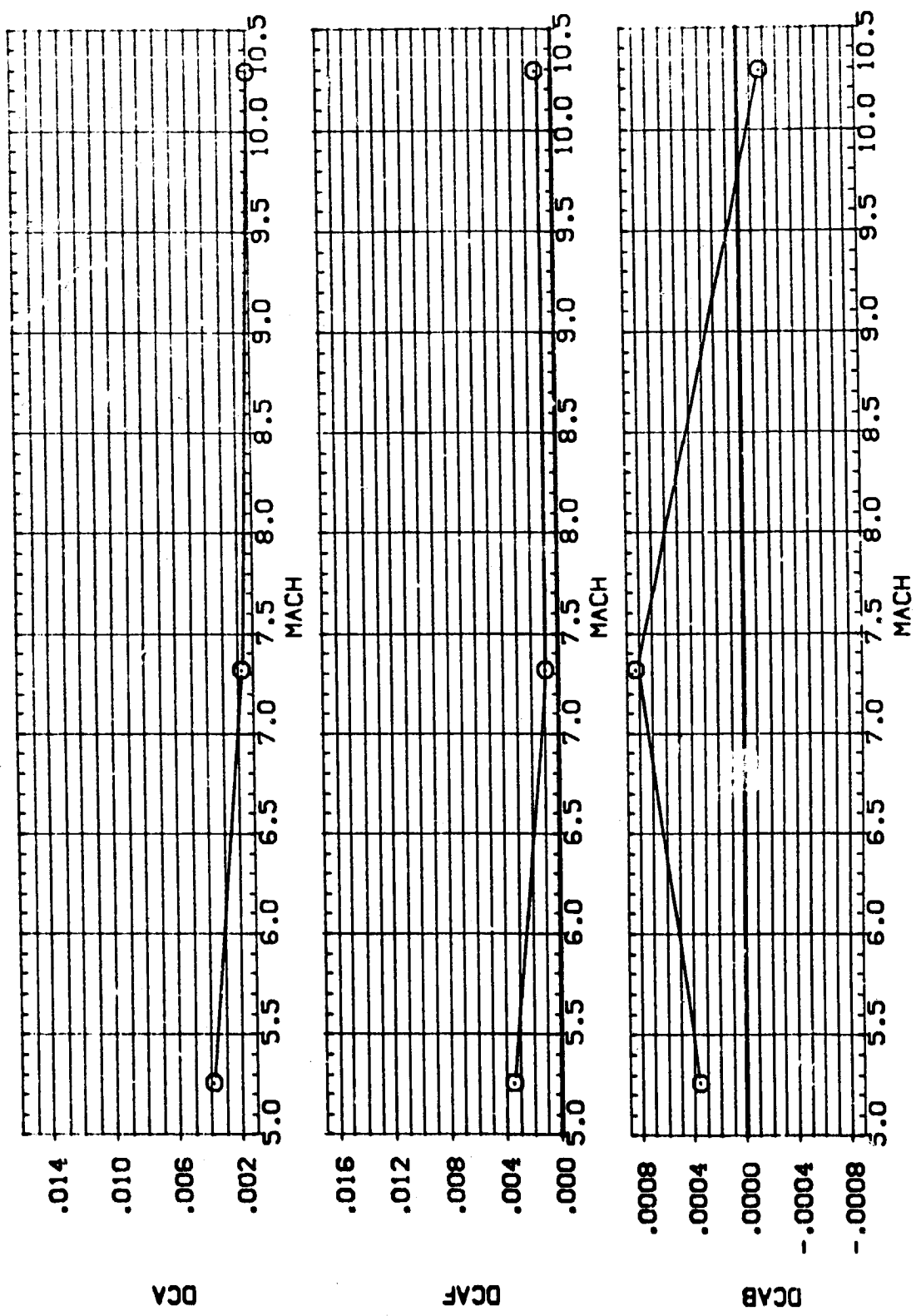


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER
 (C)ALPHA = 20.00

REFERENCE INFORMATION
 SREF 2690.0700 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 YMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELBOF
 DELEVN -40.000
 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (GBR056) O ARES 3.5-160 0A118 (B10F4C5D7KGN8)(V87E18)(V5M5)

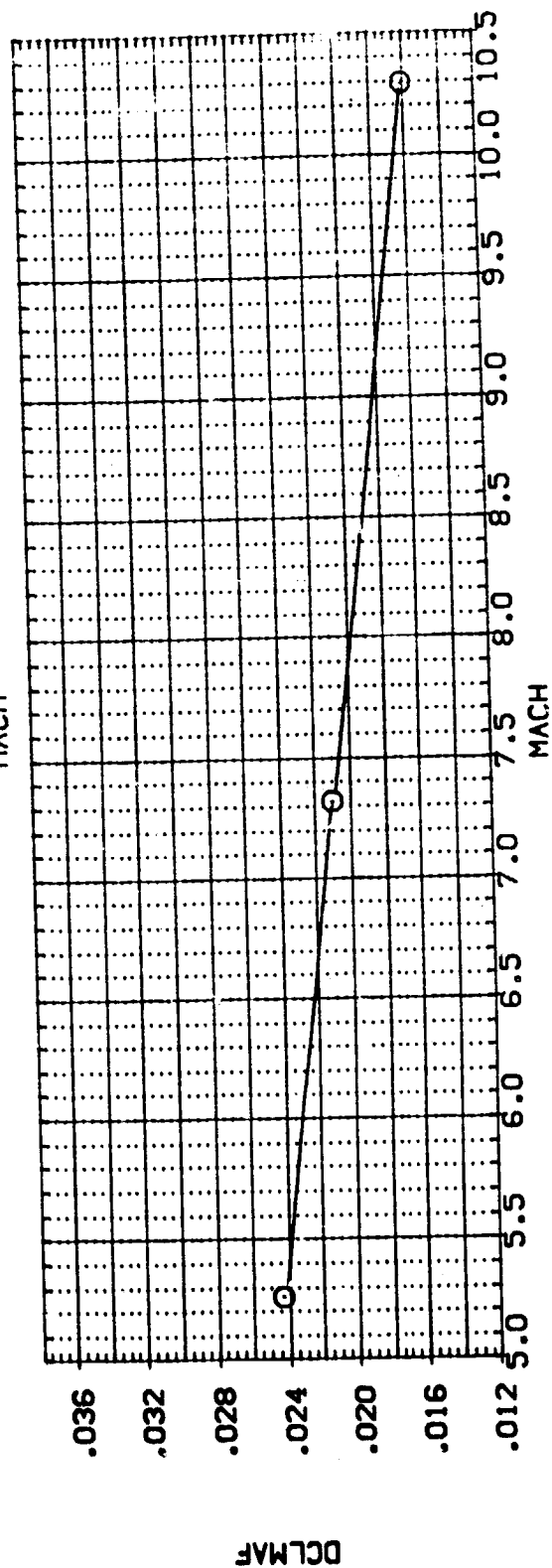
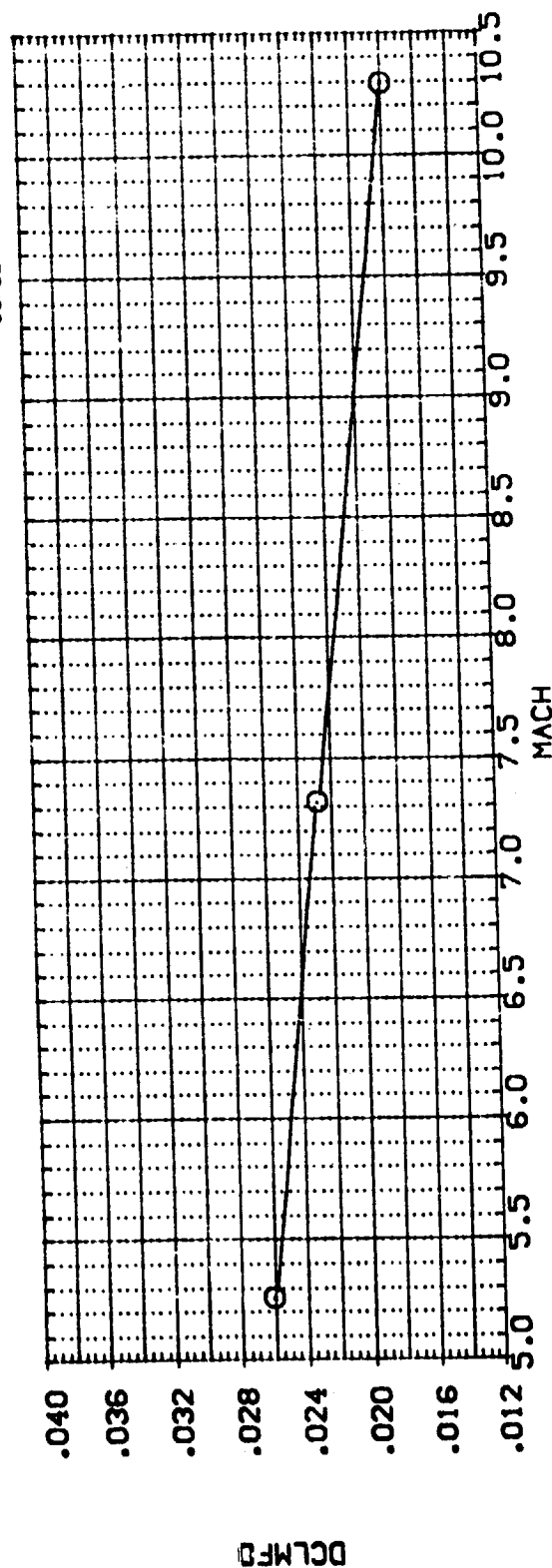


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = .00

DATA SET SYMBOL: (GBX066) \bigcirc CONFIGURATION DESCRIPTION: ARES 3.5-160 GA118 (B10F4C507-G48)(V87E18)(V5R5)

DELEVN: -40.000 DELBOF: .000

REFERENCE INFORMATION
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: 400.0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

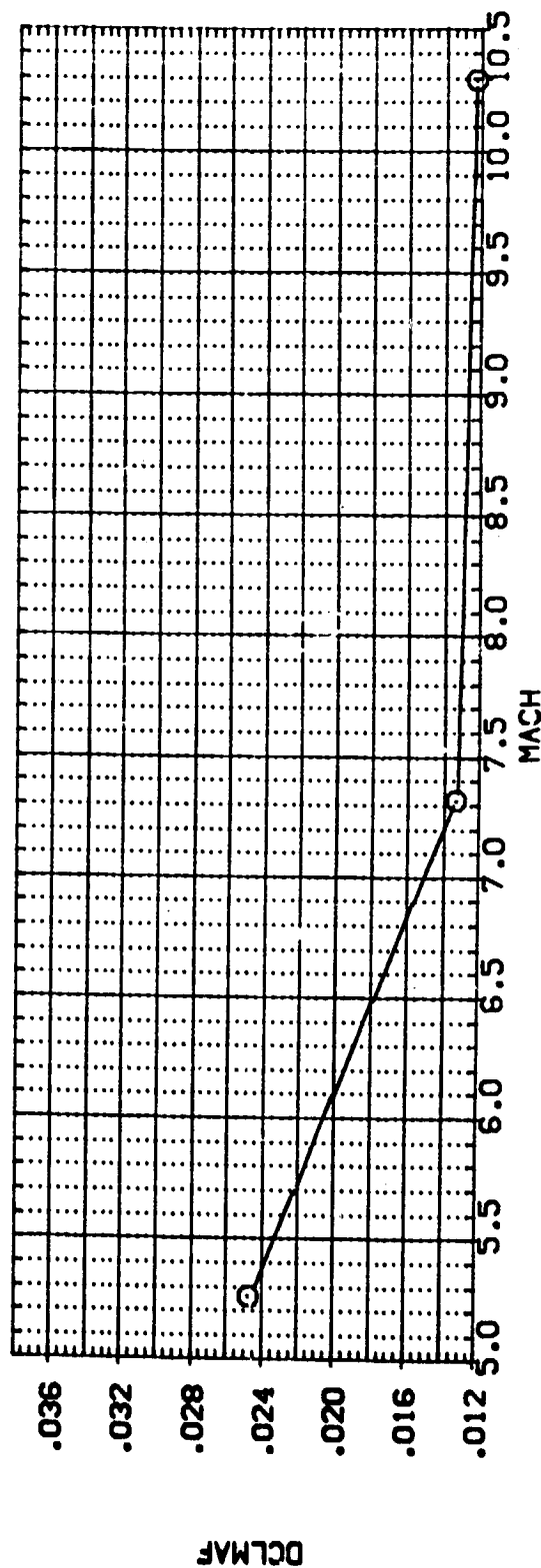
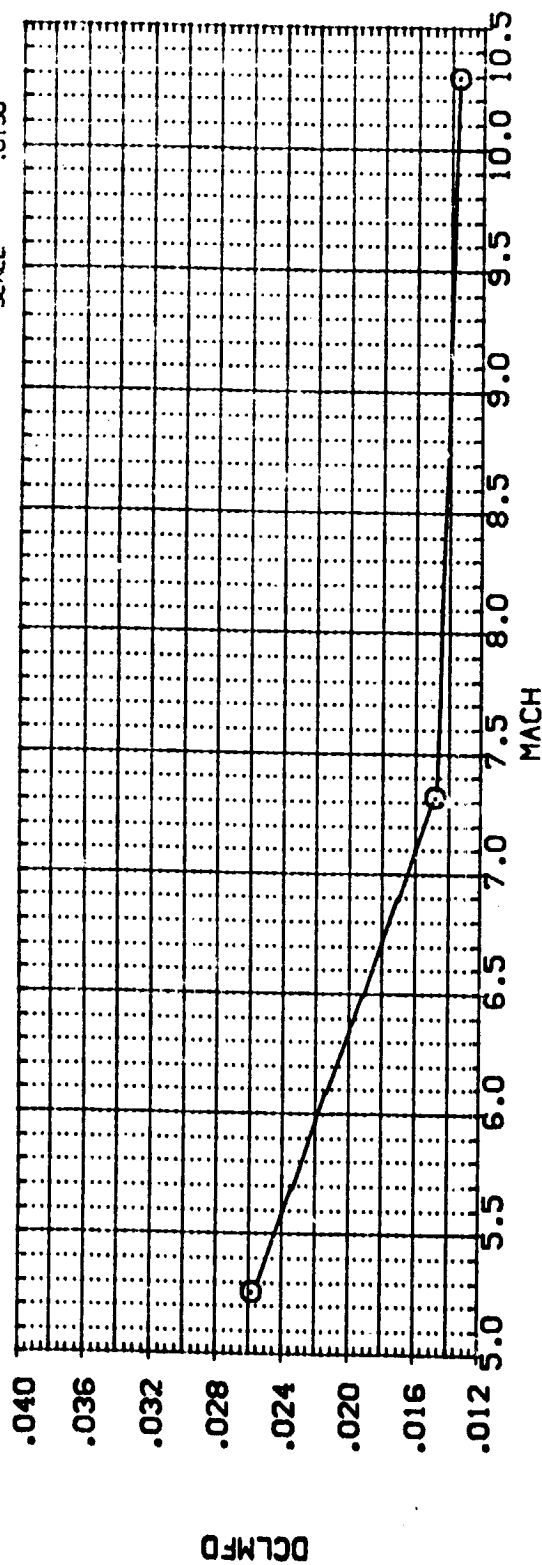


FIG. 2.E INCREMENTAL ELEVN EFFECTS WITH MACH NUMBER
 (B) ALPHA = 10.00



REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XREF 1076.4800 IN.
 YREF 400.0000 IN.
 ZREF 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 -40.000 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (GEX055) O AMES 3.5-160 DA11B (810F4CS077G-8)(V87E18)(V59S)

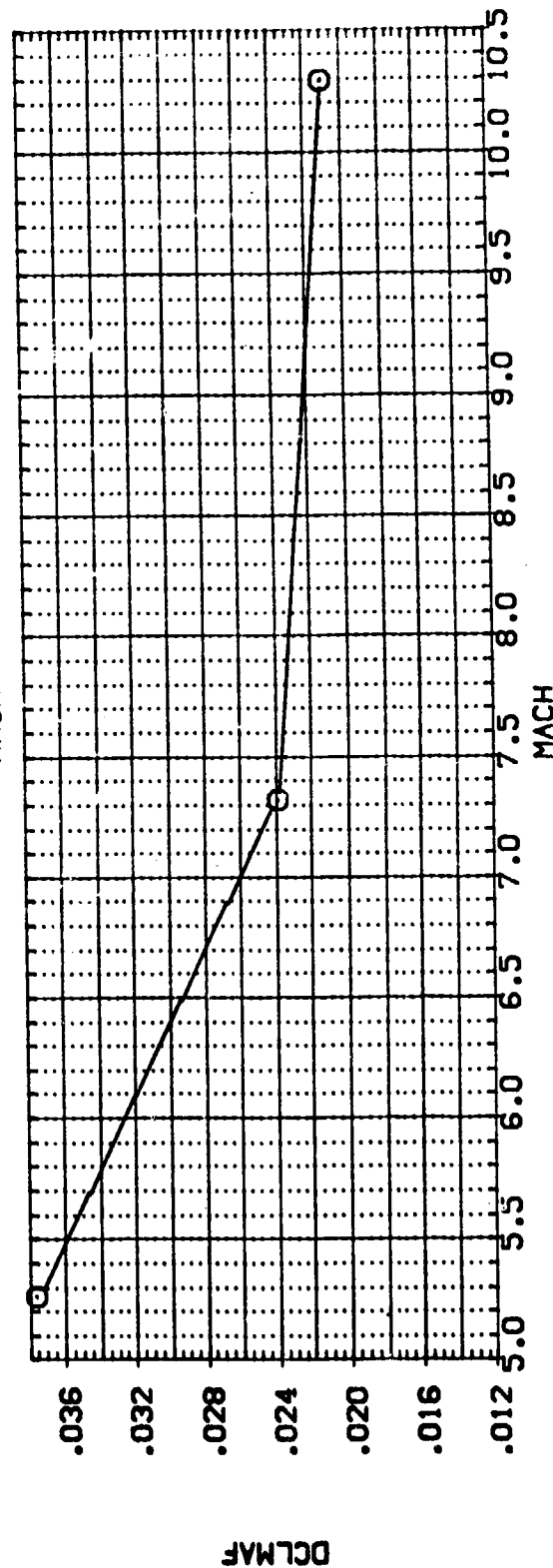
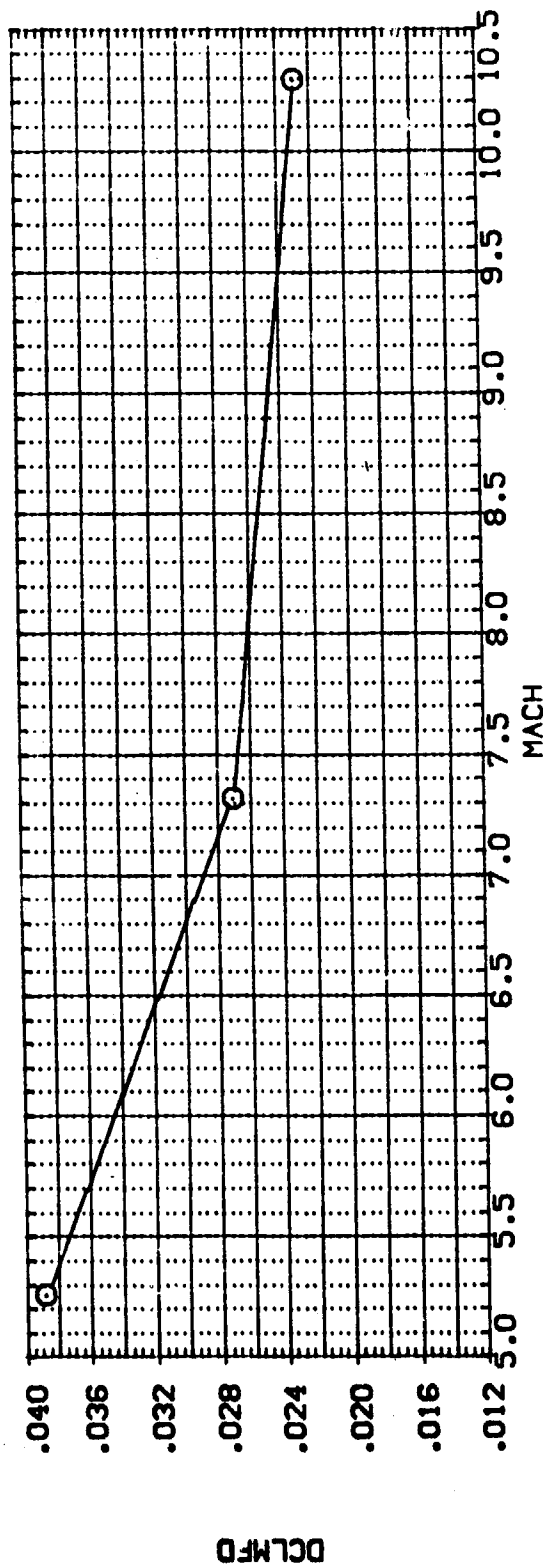


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 20.00

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6800 IN.
XMRP	1076.4800 IN.
YMRP	.0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

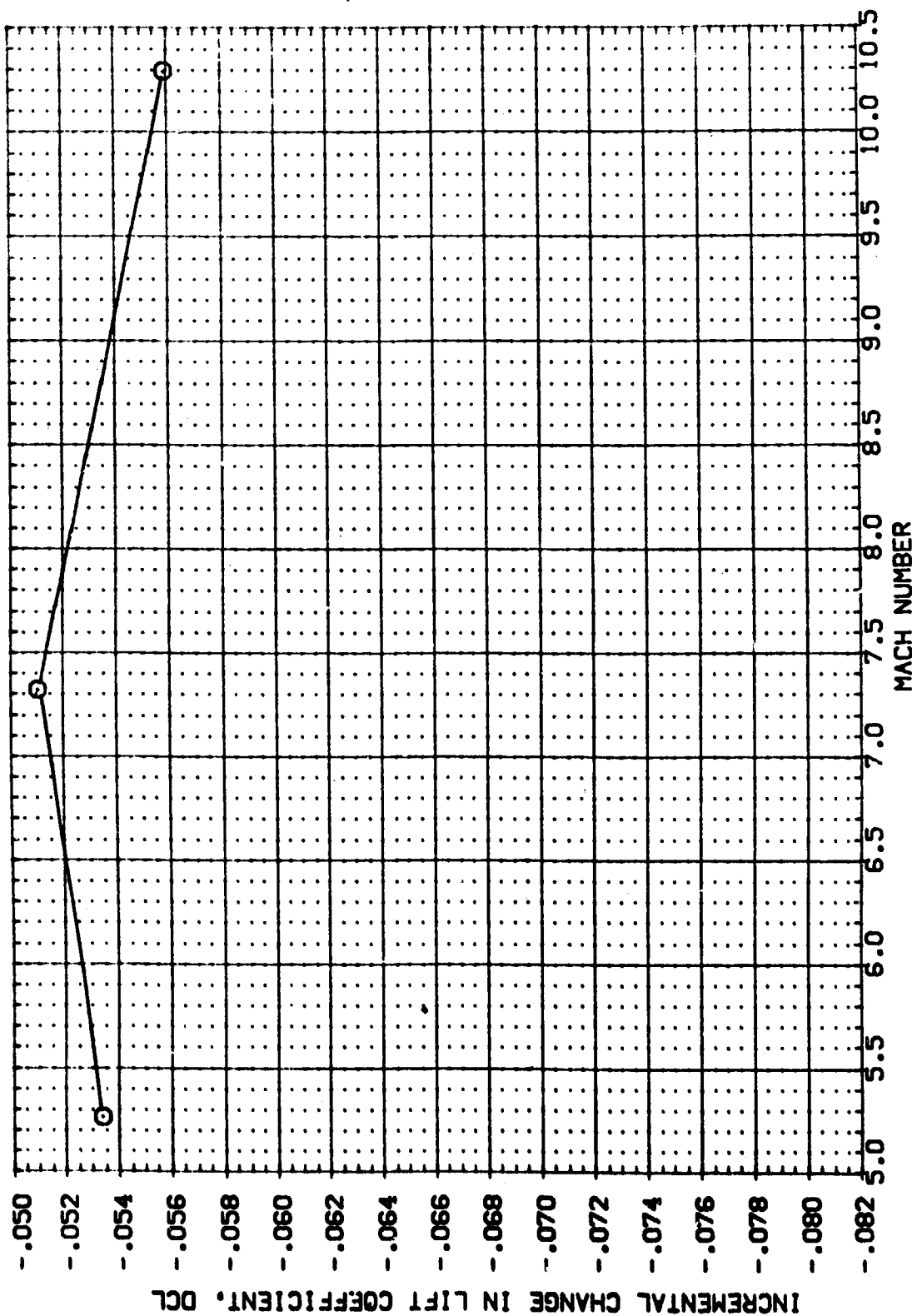


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER

$$C(\lambda)ALPHA = 30.00$$

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XPRP 1076.4800 IN.
 YPRP .0000 IN.
 ZPRP .0000 IN.
 SCALE 400.0000 IN.
 SCALE .0150

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF
 (030048) O AYES 3.5-160 0A118 (B10F4C507H3-8)(V87E18)(V5R5) -40.000 .000

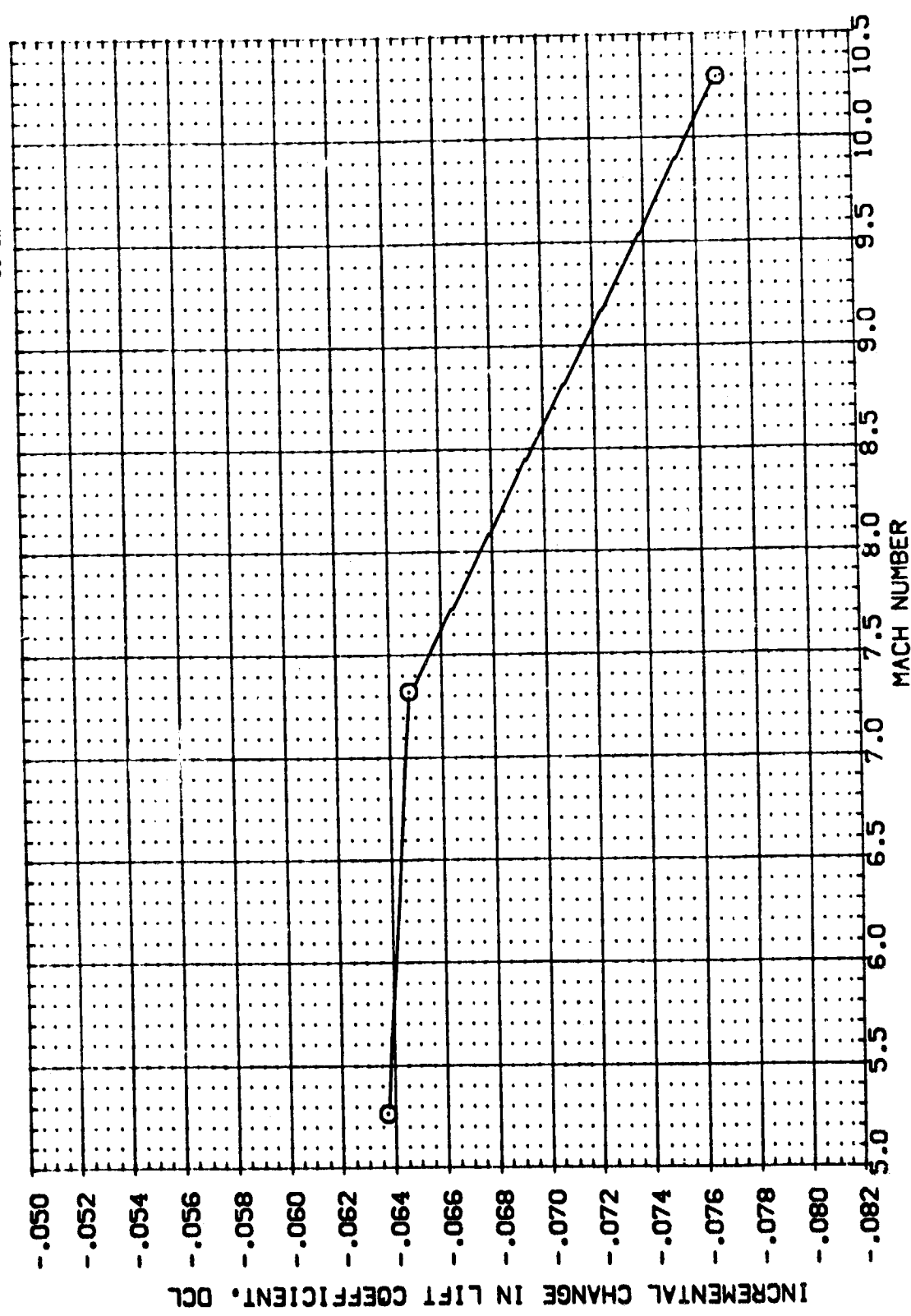


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B)ALPHA = 35.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF
 (CXC48) ○ APES 3.5-160 DA118 (B1DF4C507G48)(V87E18)(V395) -40.000 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

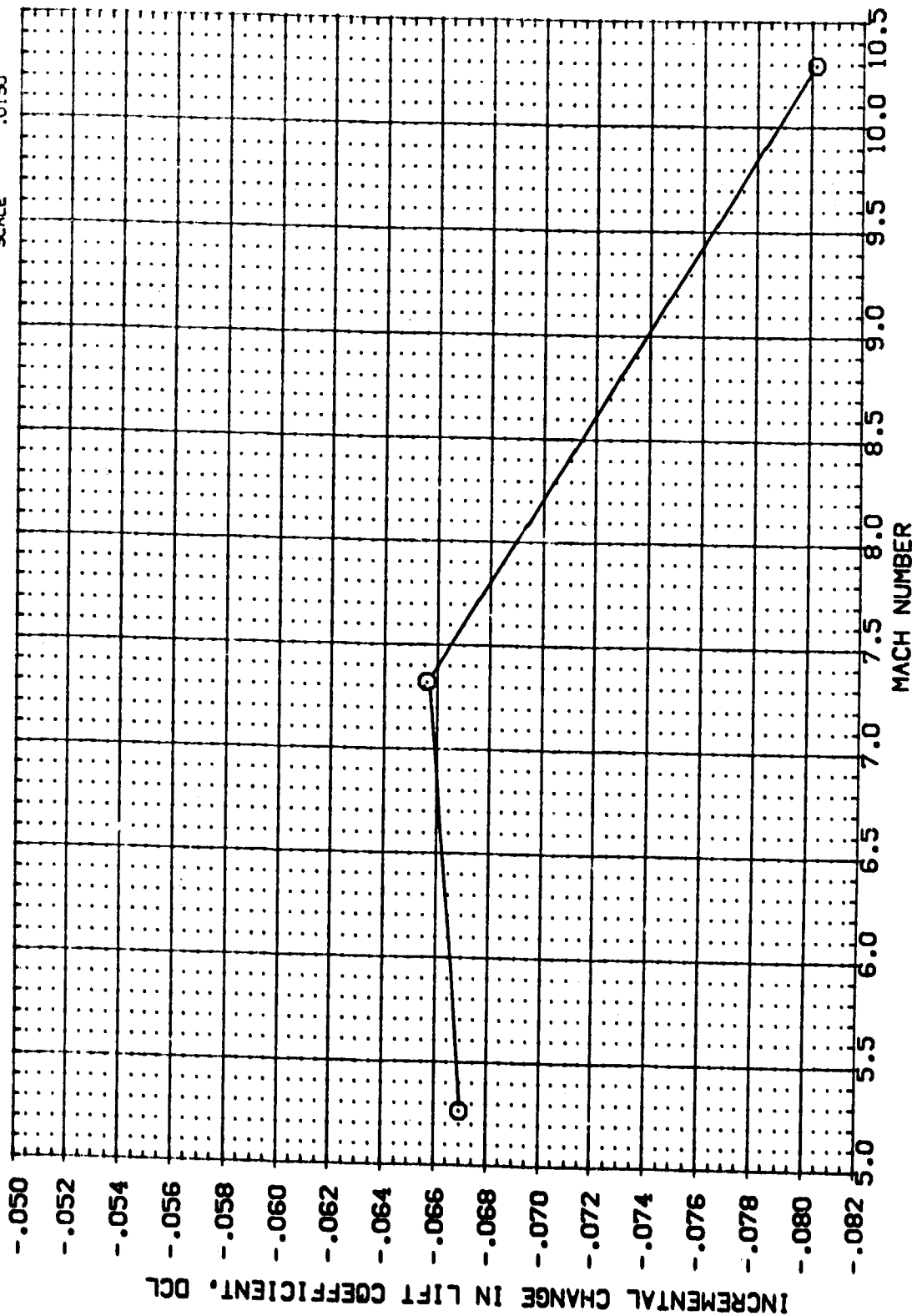


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (CJALPHA = 39.00)

DATA SET SYMBOL: (G80048) ○ ARES 3.5-160 CA118 (B10F4C5D7K3N8)(V87E18)(V59S) DELEVN DELBOF .000

REFERENCE INFORMATION:
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

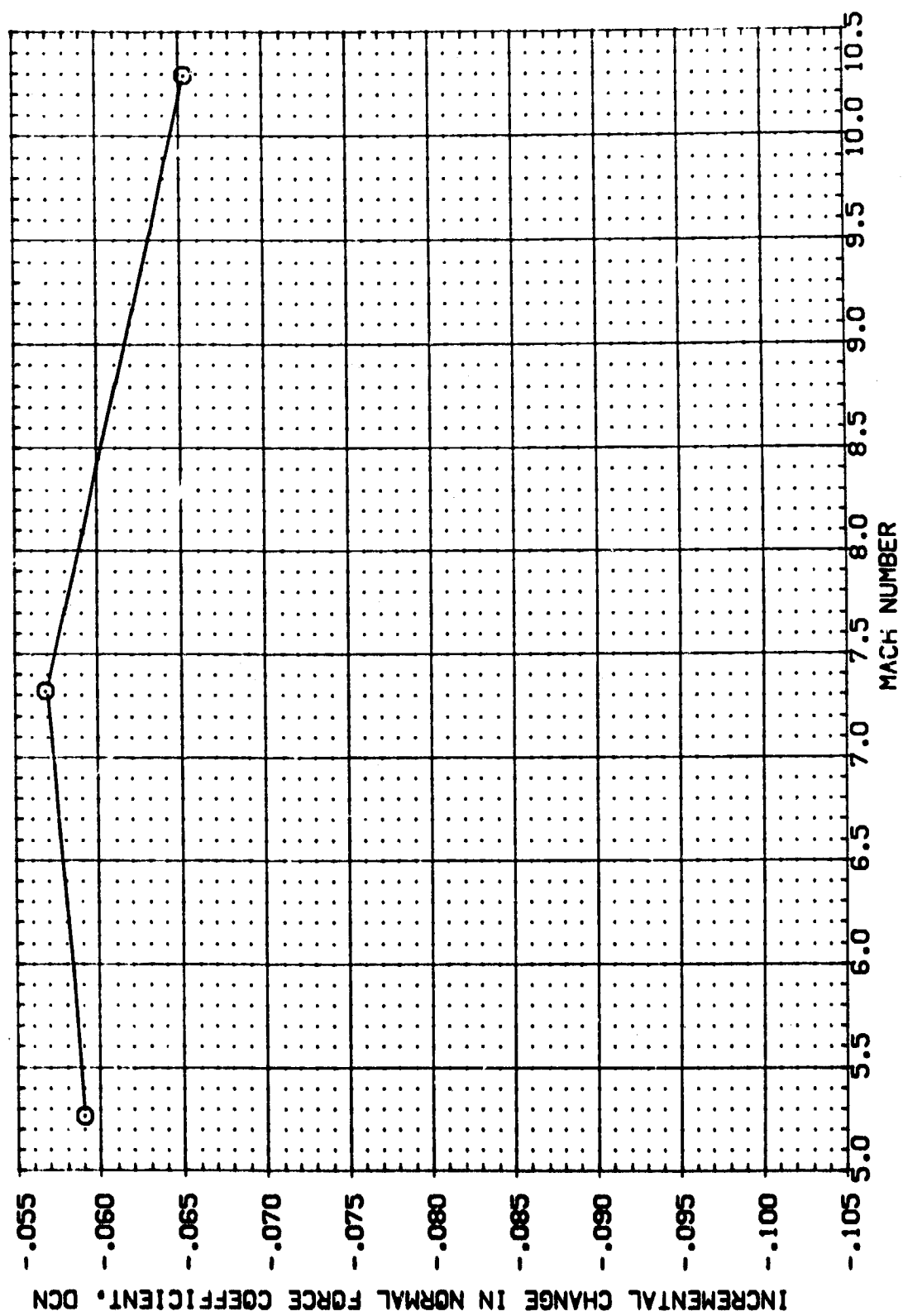


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBDF
 (880048) O APES 3.5-160 DA118 (B10F4C507-348)(V87E18)(V59S) -40.000 .000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8100 IN.
 BREF 936.6900 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

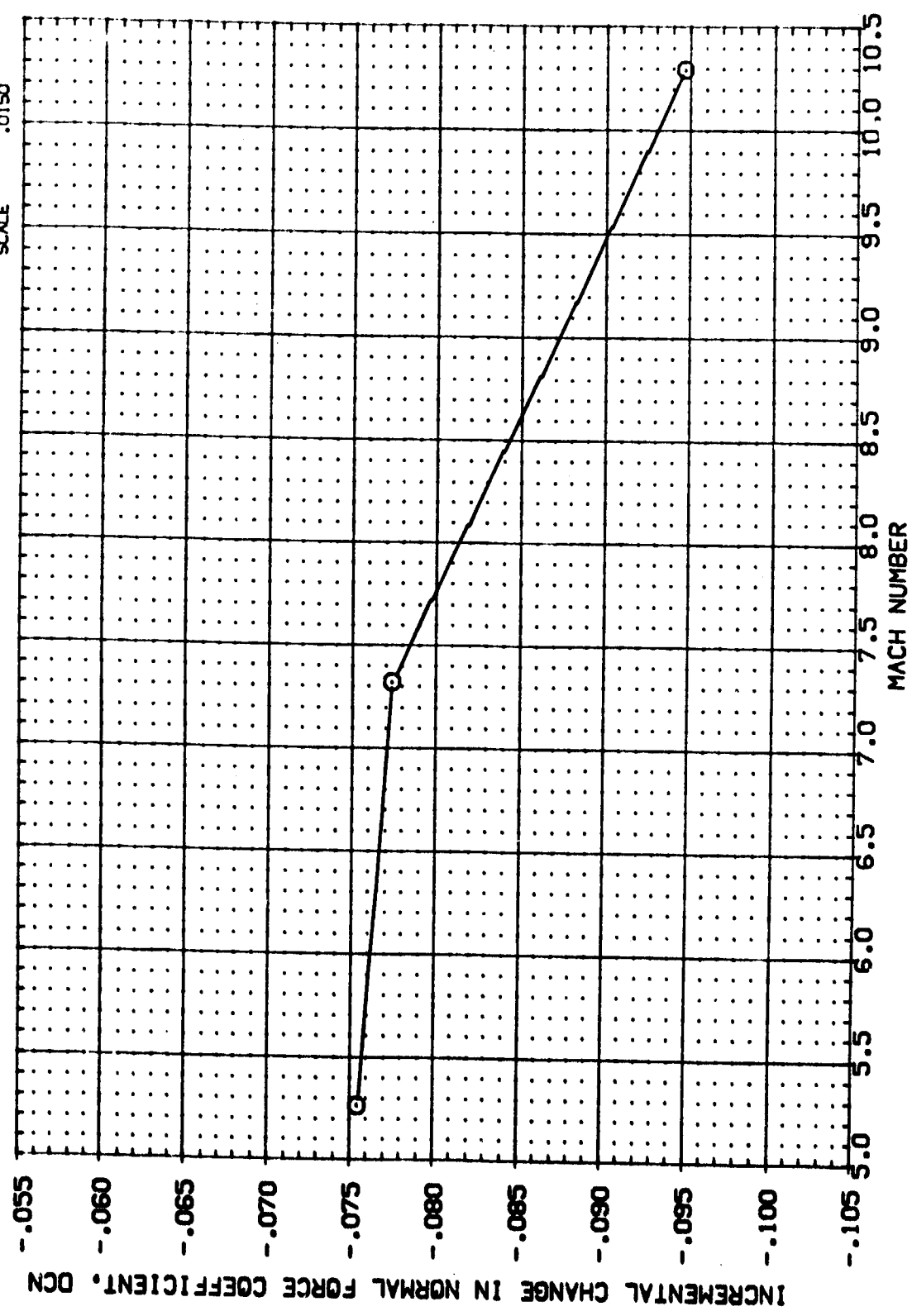


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (B) ALPHA = 35.00

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XPRP 1076.4800 IN.
 YPRP 400.0000 IN.
 ZPRP 400.0000 IN.
 SCALE .0150

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (680048) ○ AYES 3.5-160 GA118 (810F4C3D77G48)(V87E18)(V95S) DELBDF
 DELEW -40.000 DELBDF .000

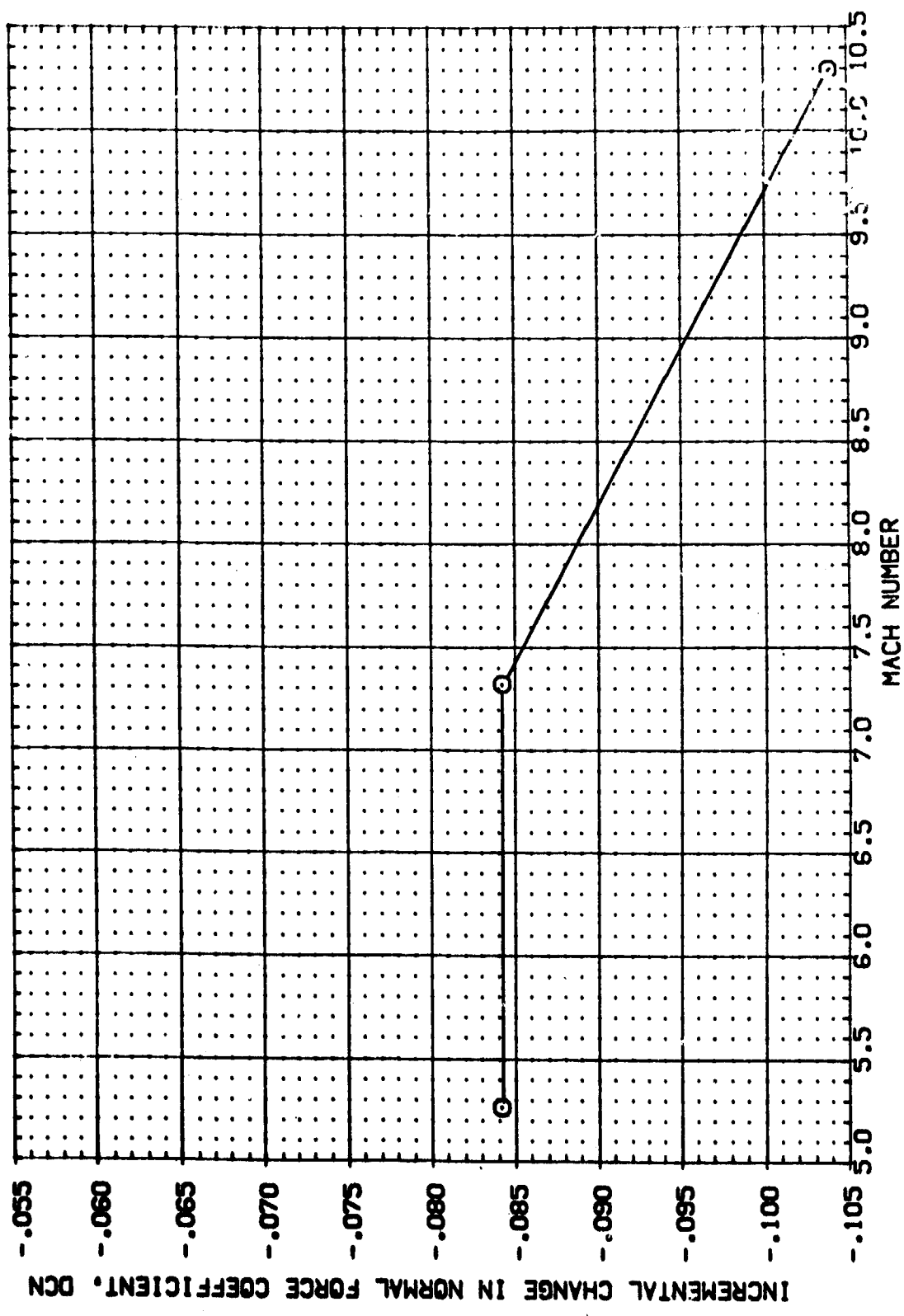


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 39.00

DATA SET SYMBOL: \bigcirc CONFIGURATION DESCRIPTION: ASES 3.5-160 GA.118 (B10F4C507G4B)(V87E18)(V59R5) DELEV: -40.000 DELBOF: .000

REFERENCE INFORMATION
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XPRP: 1076.4800 IN.
 YPRP: .0000 IN.
 ZPRP: 400.0000 IN.
 SCALE: .0150

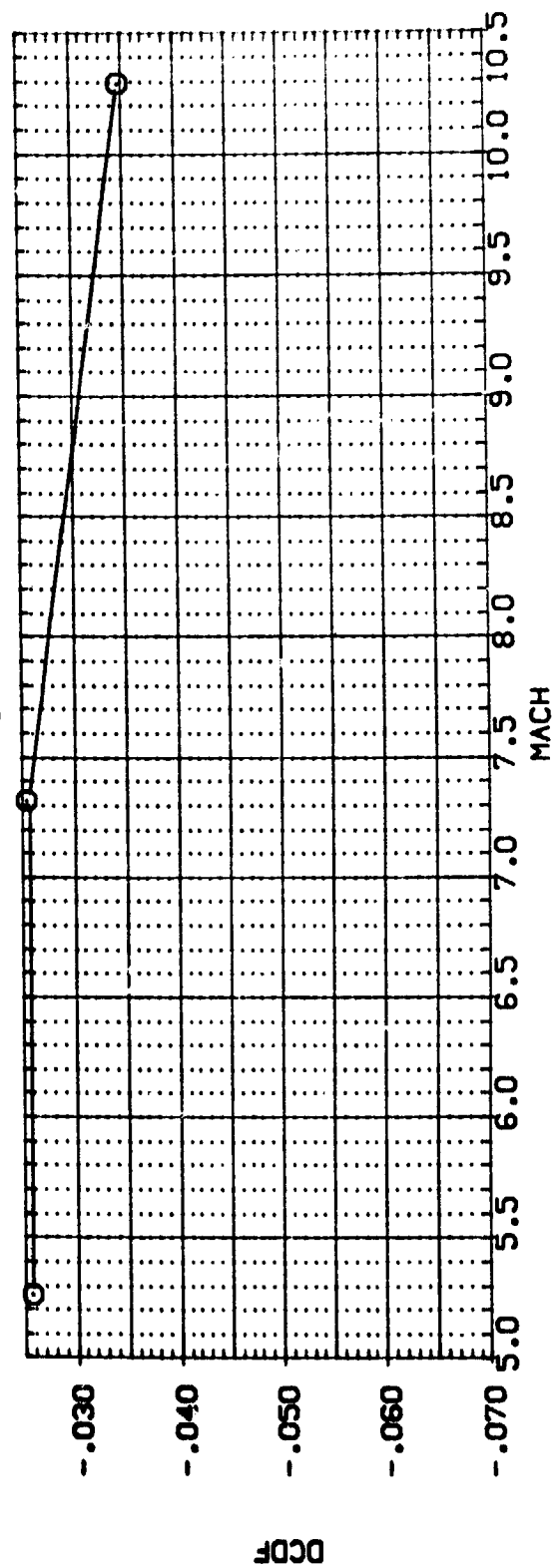
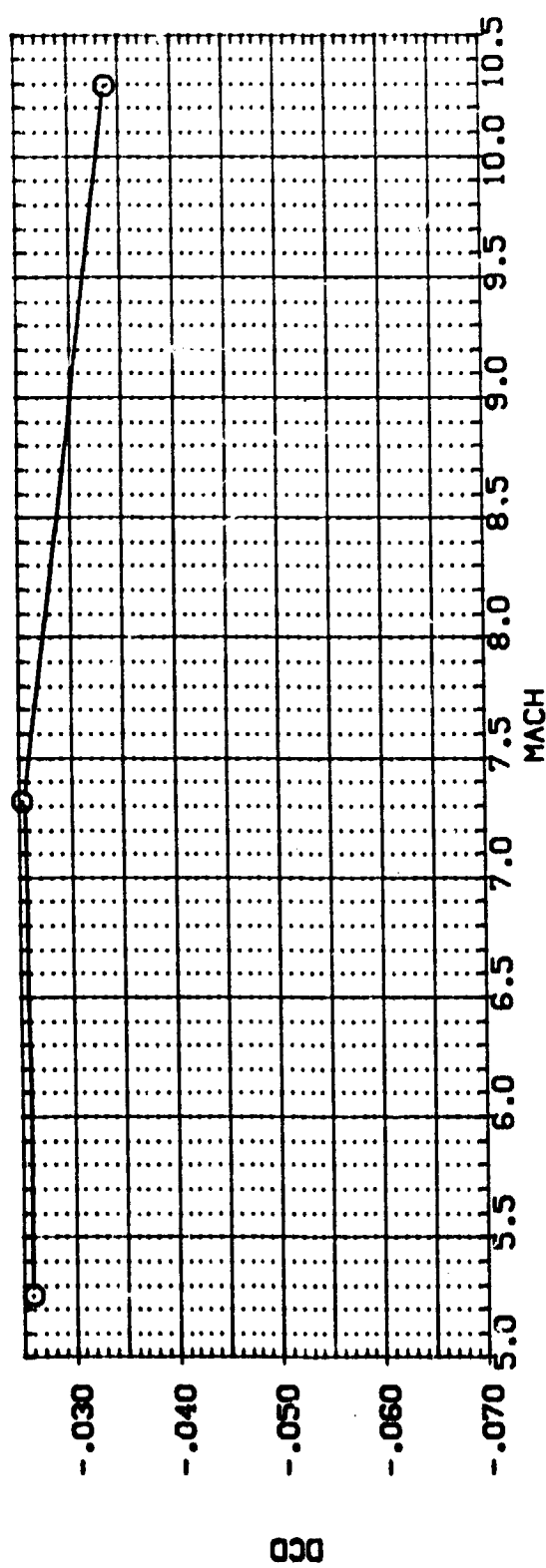


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

DATA SET SYMBOL: 0118 (810F4C507M348)(W87E18)(V5RS) -40.000 .000

CONFIGURATION DESCRIPTION: DELEV DELBOF

REFERENCE INFORMATION:

SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	400.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

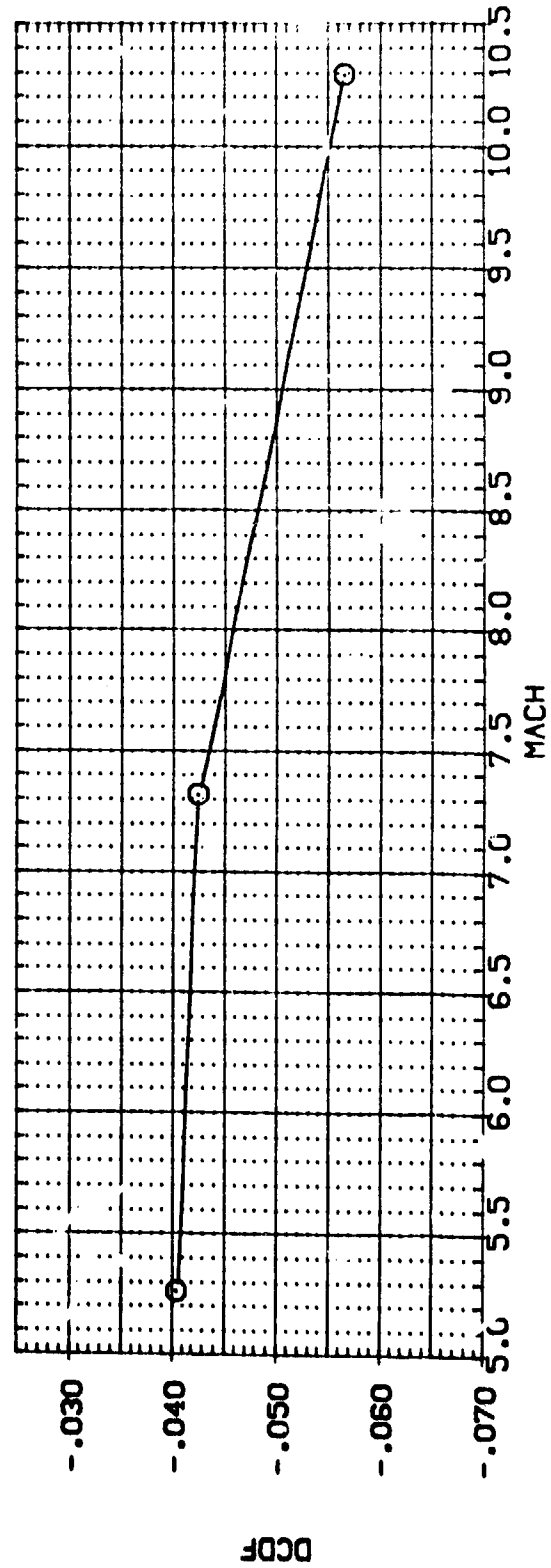
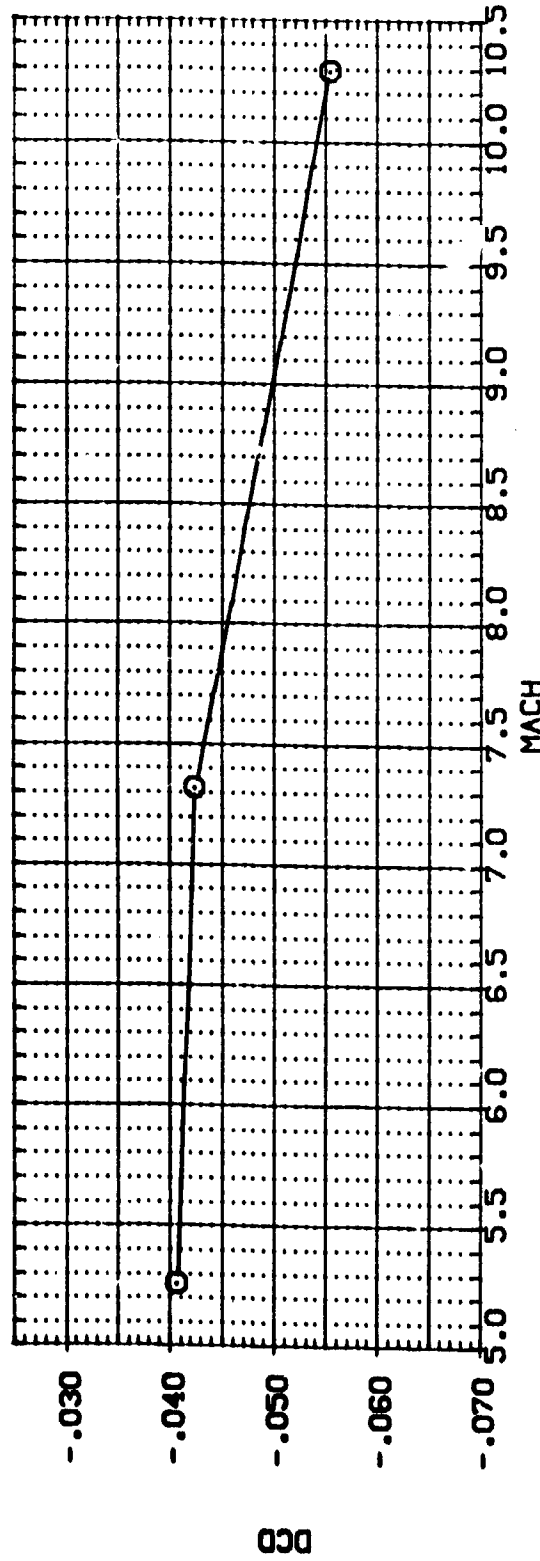


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B)ALPHA = 35.00

DATA SET SYMBOL: \bigcirc AVE 3.5-160 GA118 (810F4C507RQNB)(V87E18)(V87S) -40.000 DELREF: .000

REFERENCE INFORMATION
 SREF: 2690.0000 50.FT.
 LREF: 474.8174 IN.
 BREF: 936.5830 IN.
 XREF: 1076.4800 IN.
 YREF: 400.0000 IN.
 ZREF: 400.0000 IN.
 SCALE: .0150

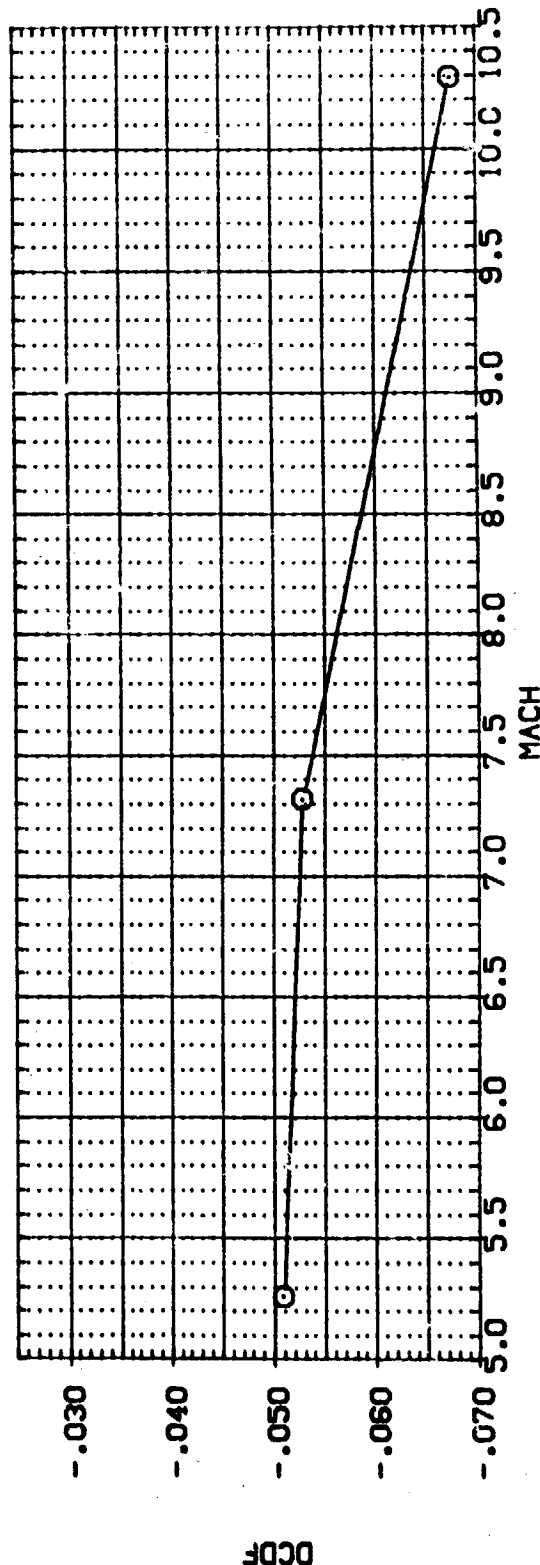
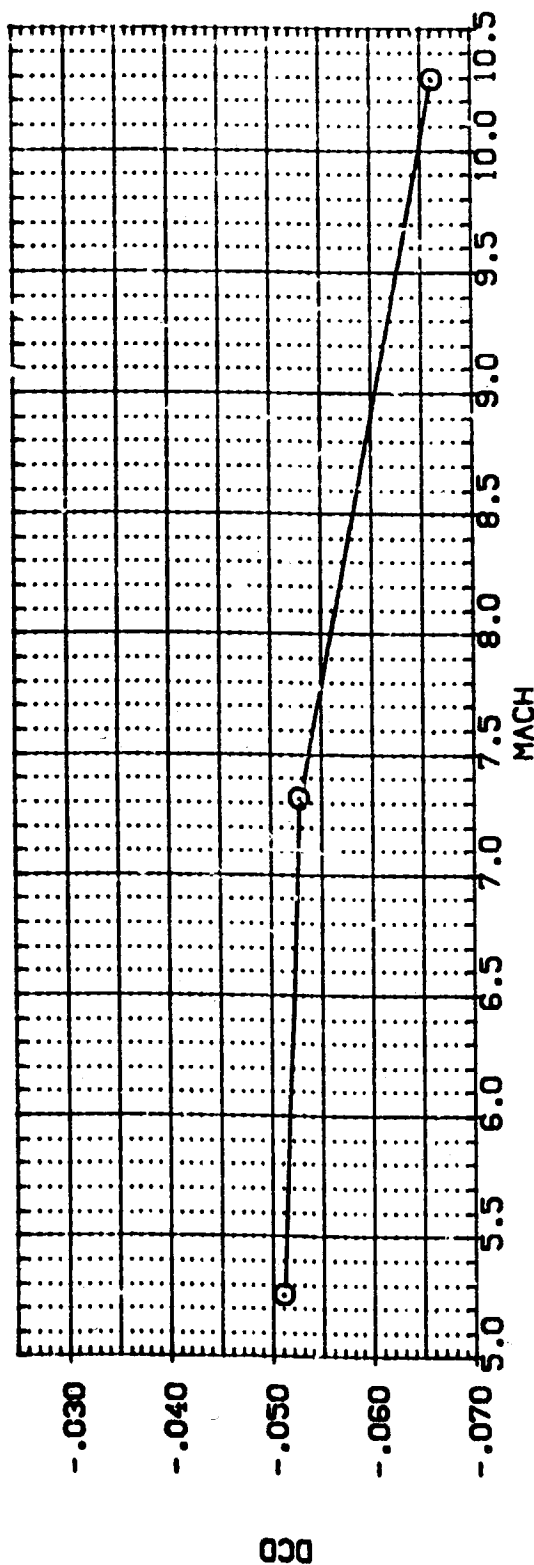


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (C)ALPHA = 39.00

REFERENCE INFORMATION:
 SHEET 3590 2000 SQ. FT.
 LIFT 474.8100 IN.
 DRIFT 536.8800 IN.
 X-REF 1076.1800 IN.
 Y-REF 400.0000 IN.
 Z-REF 400.0000 IN.
 SCALE .0150

DATA SET SYMBOL: (G80048) ○
 CONFIGURATION DESCRIPTION: ARES 3.5-180 QAL18 (810°/4CSD700-8)(WTE18)(VSR5)
 DELEV: -40.000
 DELBY: .000

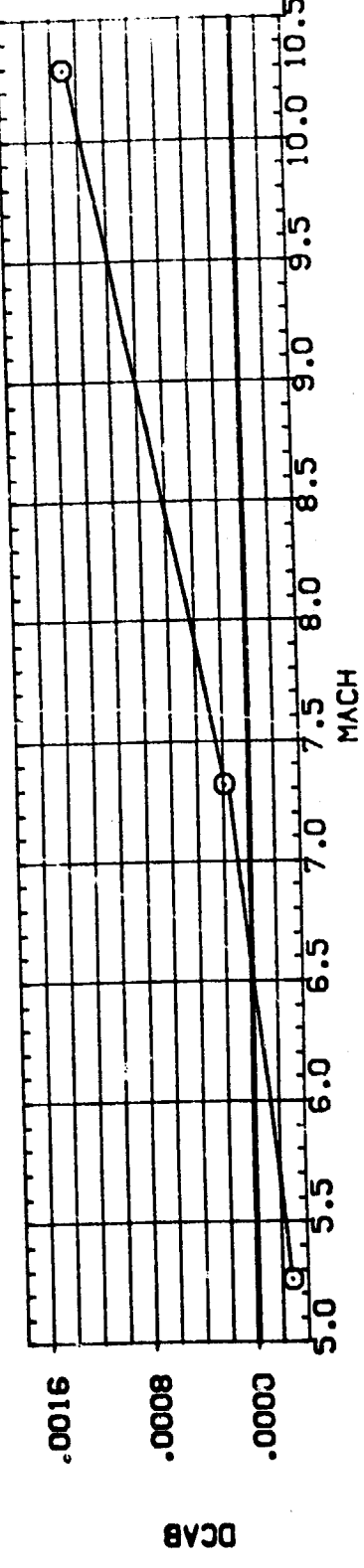
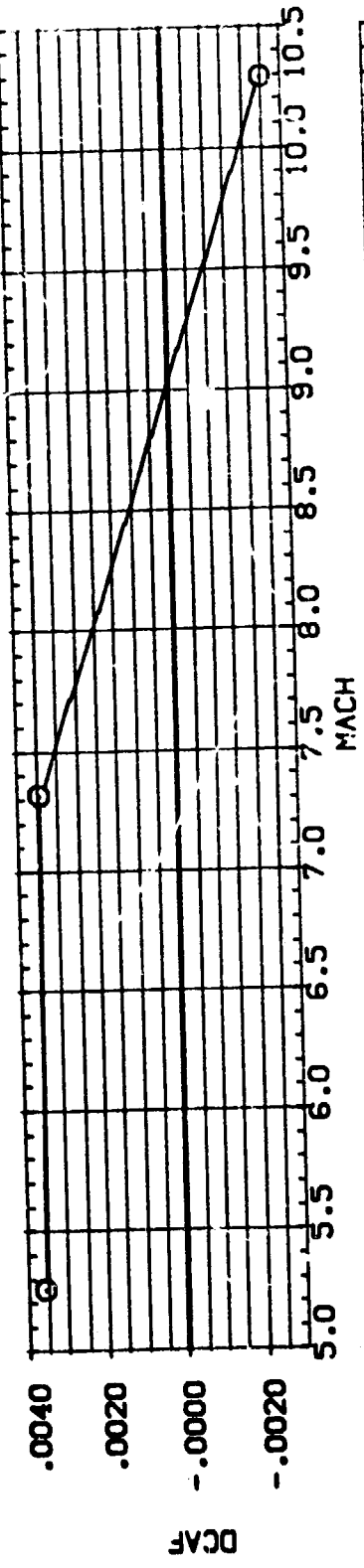
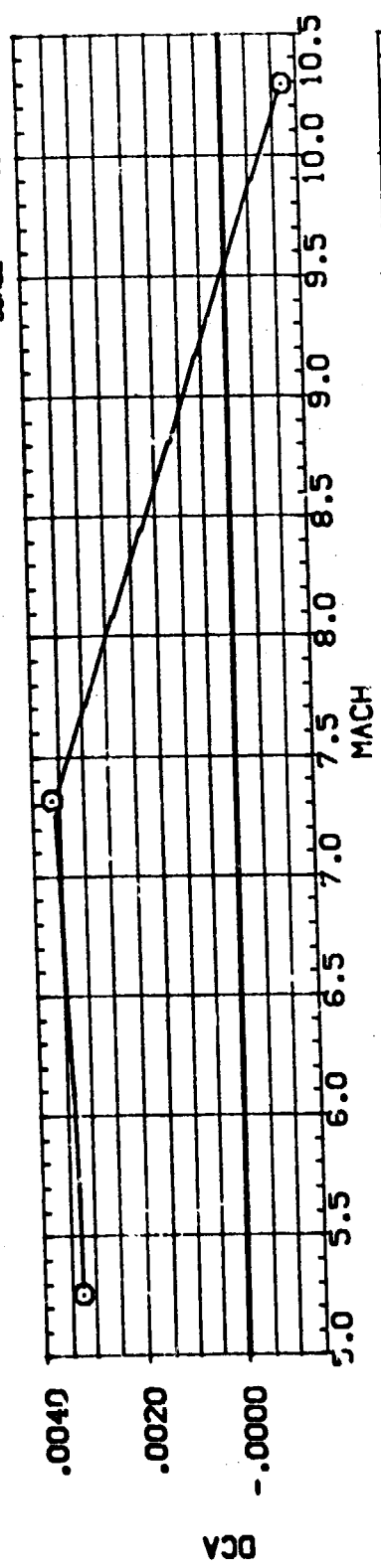


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (G80418) O AYES 3.5-160 0A118 (B10F4C507G3-8)(V87E181(V595) -0.000 .000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 174.8100
 BREF 936.6800
 XMRP 1076.4800
 YMRP 400.0000
 ZMRP 400.0000
 SCALE 0.150

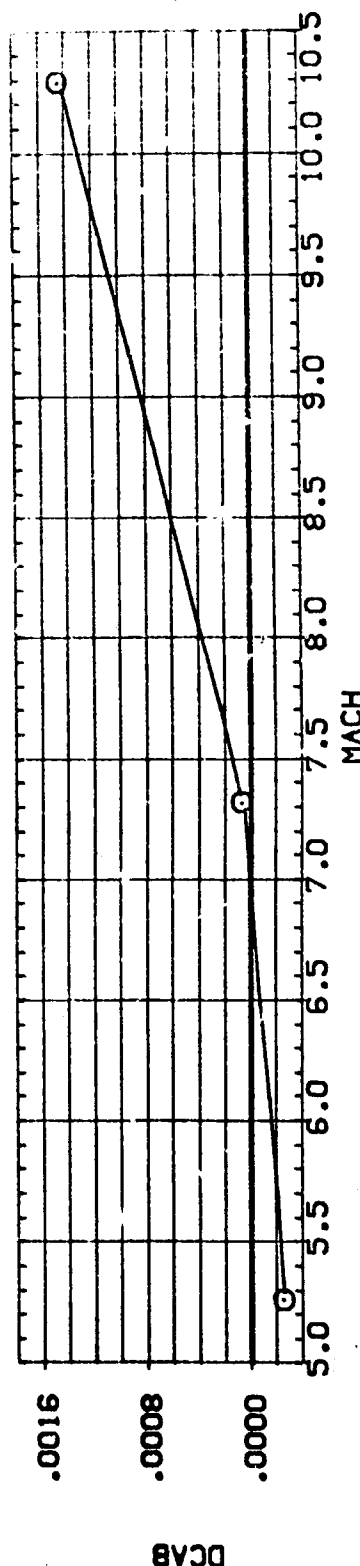
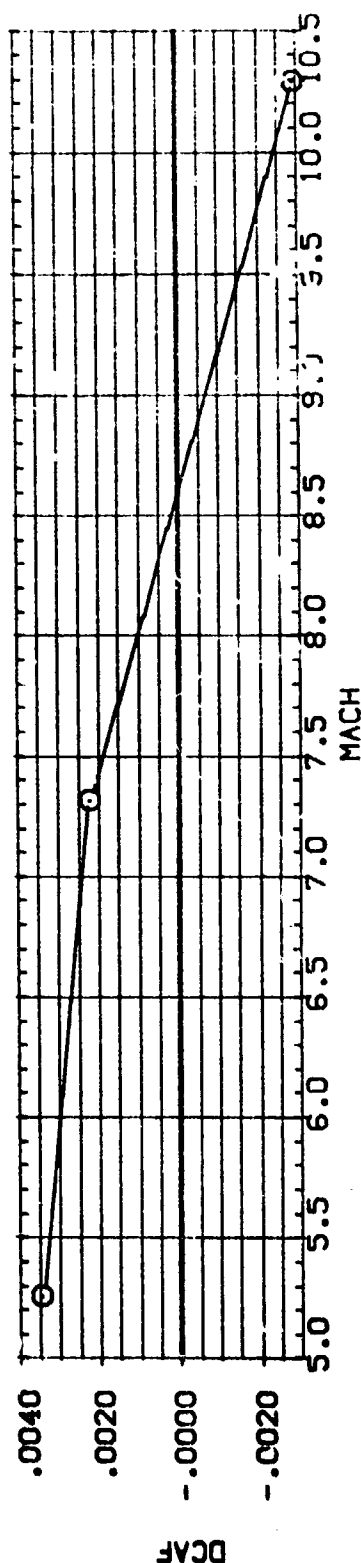
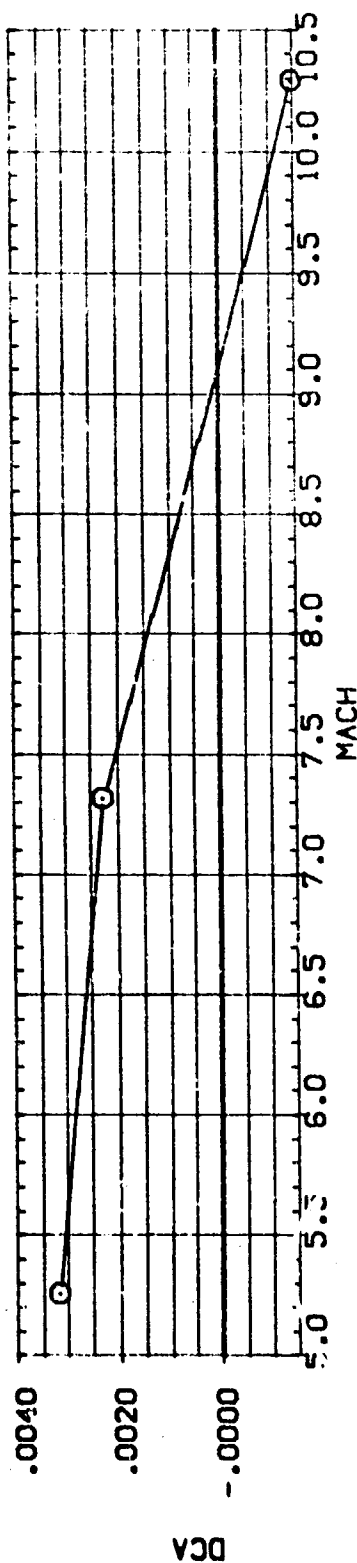


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (B) ALPHA = 35.00

DATA SET SYMBOL: (C80048) ○ ARES 3.5-160 0A11B (B10F4C507G3H8)(V87E18)(V59F5) -40.000 DELBOF .000

CONFIGURATION DESCRIPTION

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XPRP	1076.4800	IN.
YPRP	.0000	IN.
ZPRP	400.0000	IN.
SCALE	.0150	

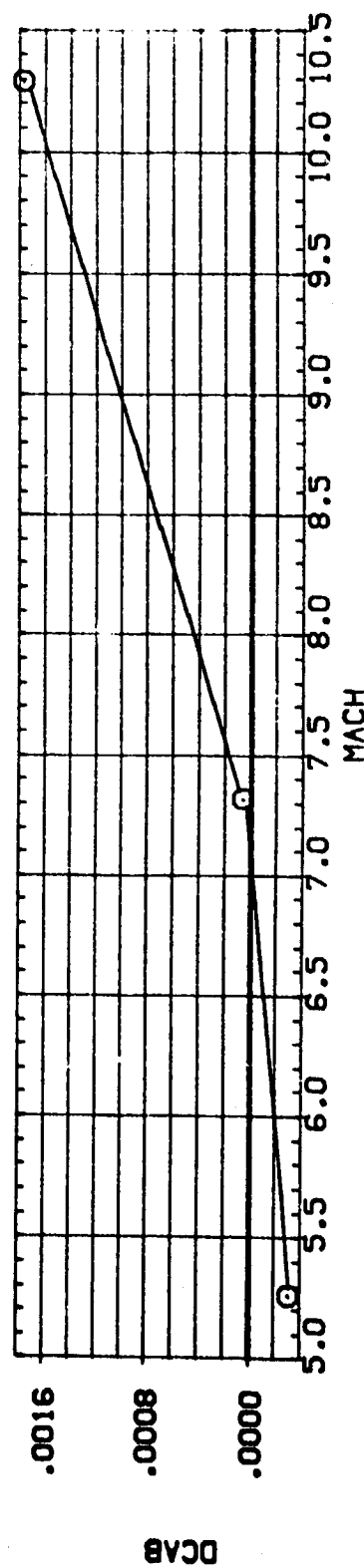
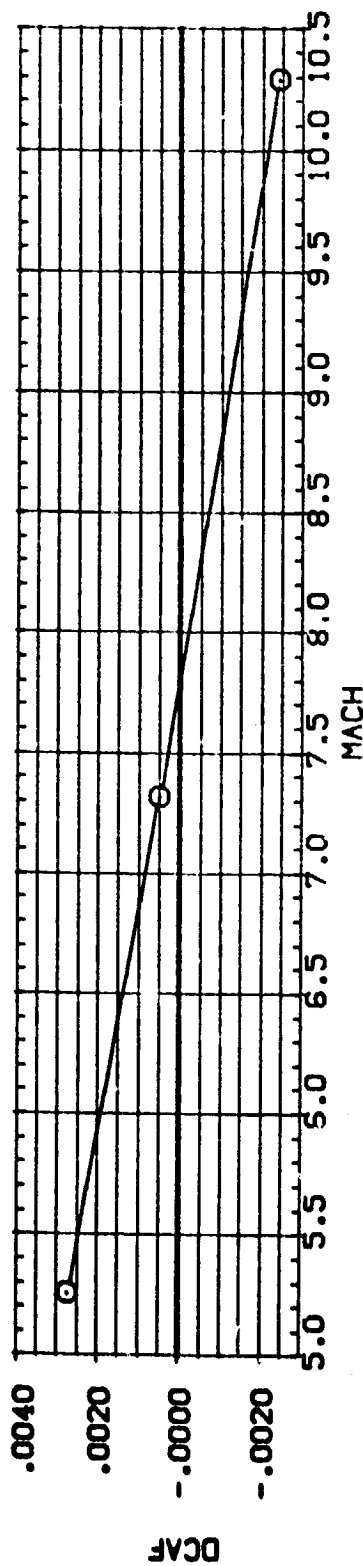
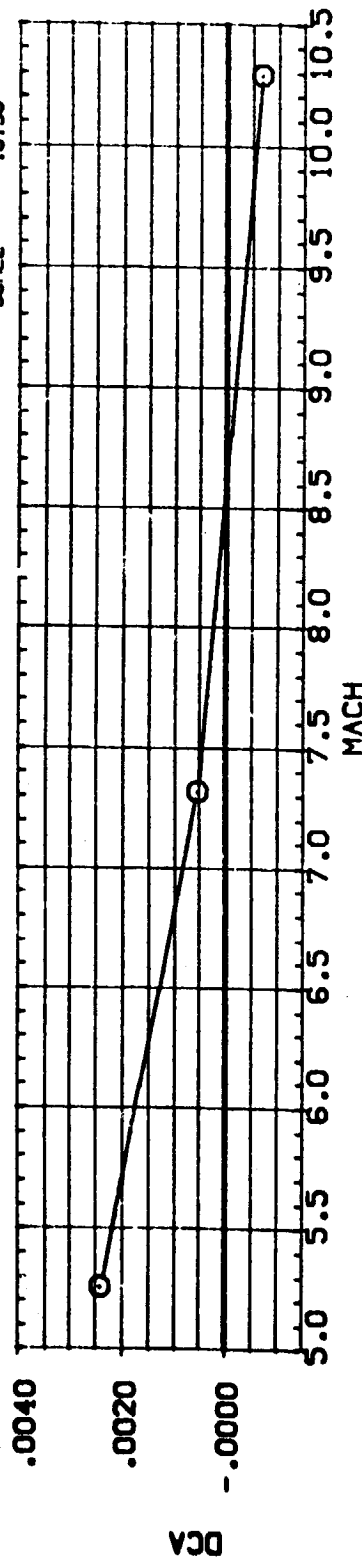


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
(C)ALPHA = 39.00

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XPRP 1076.1800 IN.
 YPRP 400.0000 IN.
 ZPRP 100.0000 IN.
 SCALE .0150

DATA SET SYMBOL (GB0048) ○

CONFIGURATION DESCRIPTION
 ANES 3.5-160 BA118 (B10F4C507K3N8)(V87E18)(V5R5)

DELEVN DELBOF
 -40.000 .000

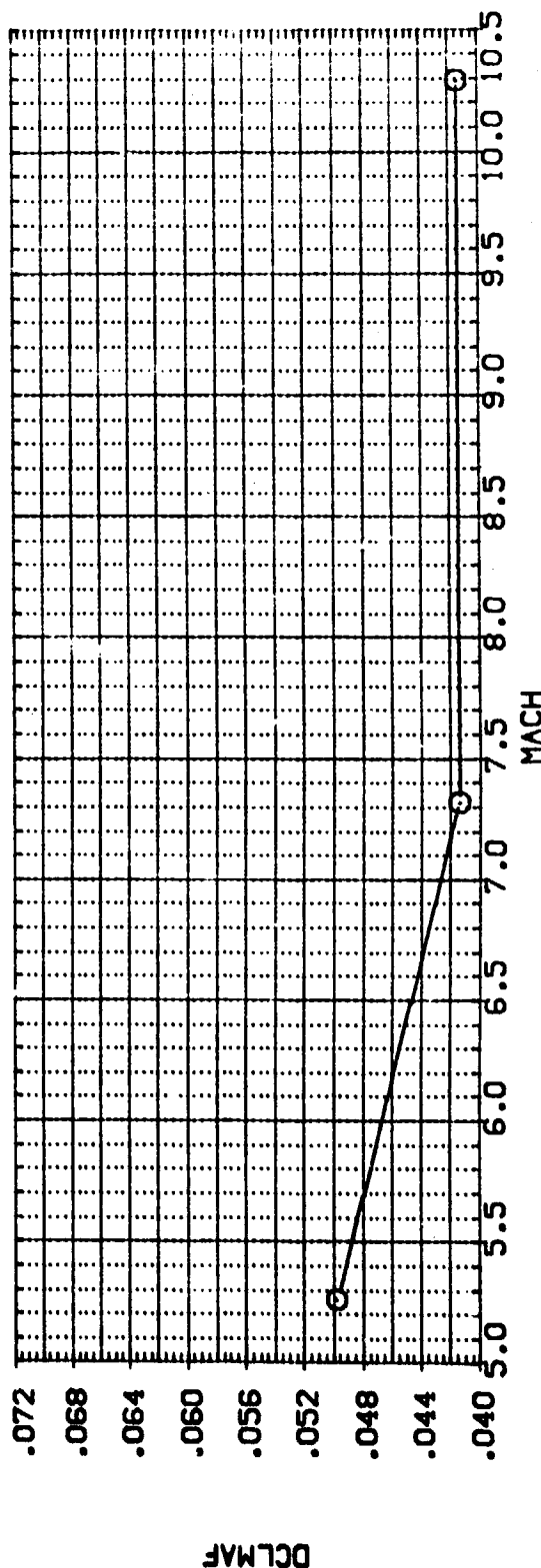
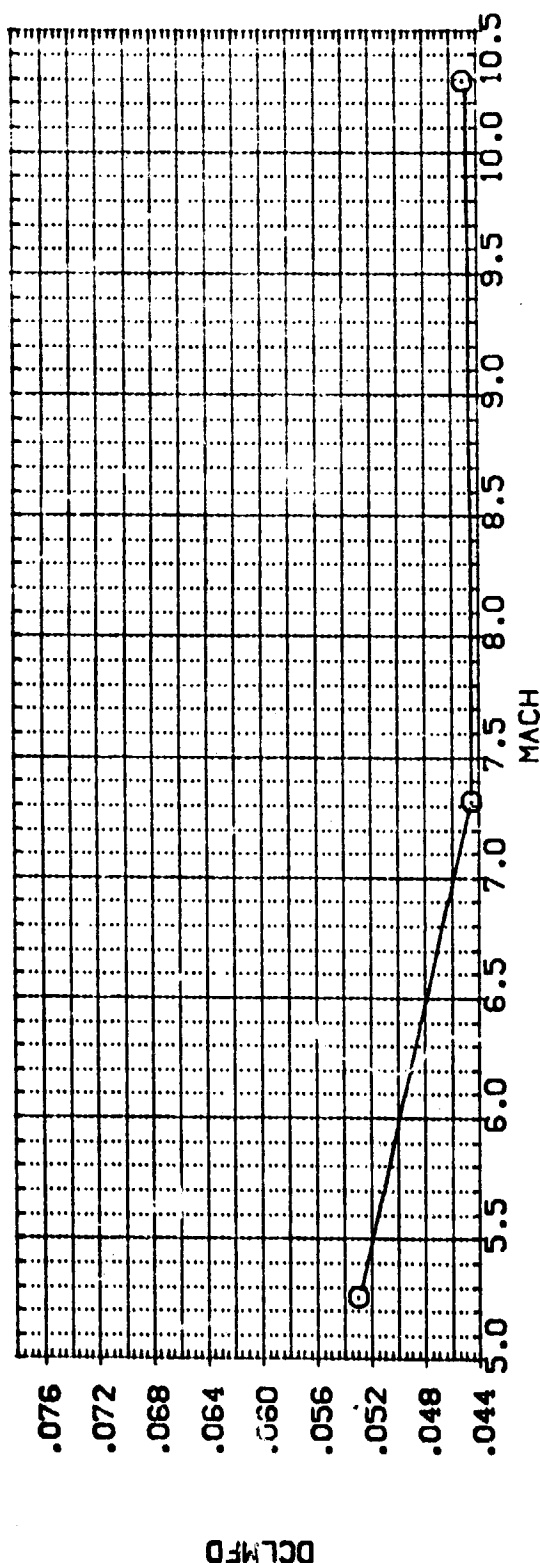


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

REFERENCE INFORMATION
 SREF 2630.0000 50.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XREF 1076.4800 IN.
 YREF 0.0000 IN.
 ZREF 400.0000 IN.
 SCALE .0150

DELEV .000

DATA SET SYMBOL ○ CONFIGURATION DESCRIPTION
 (030048) ARES 3.5-160 0A11B (B10F4C507G3B8)(1467E181(V395))

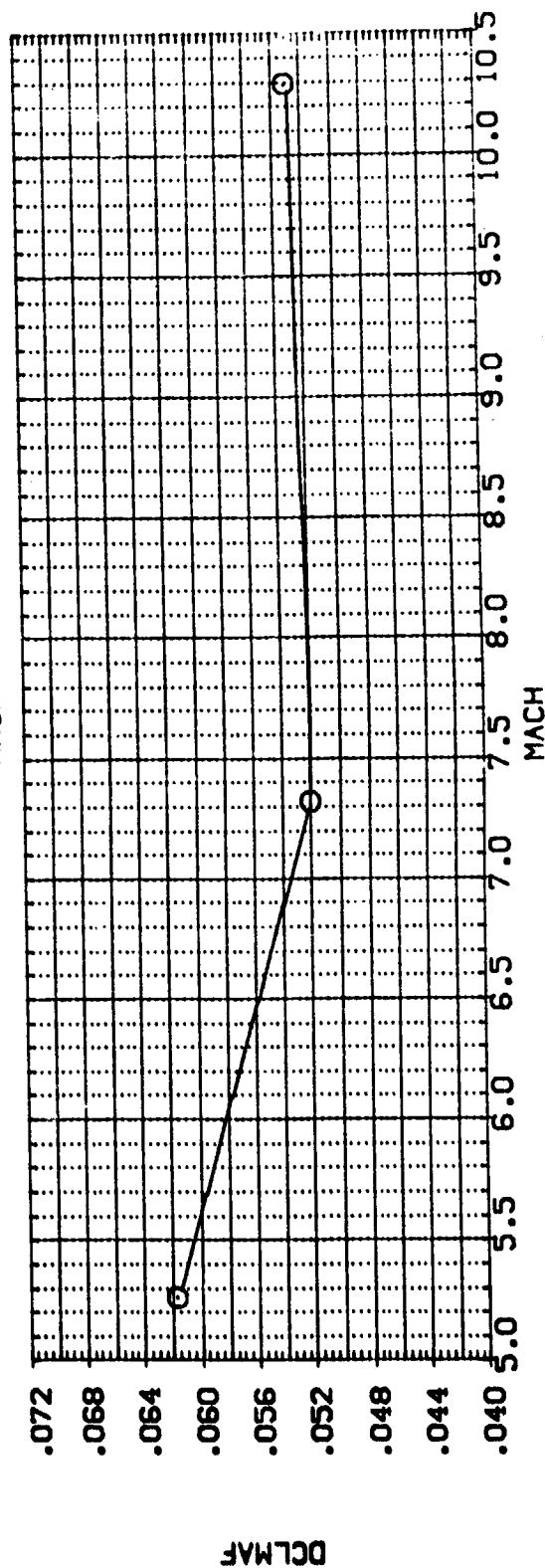
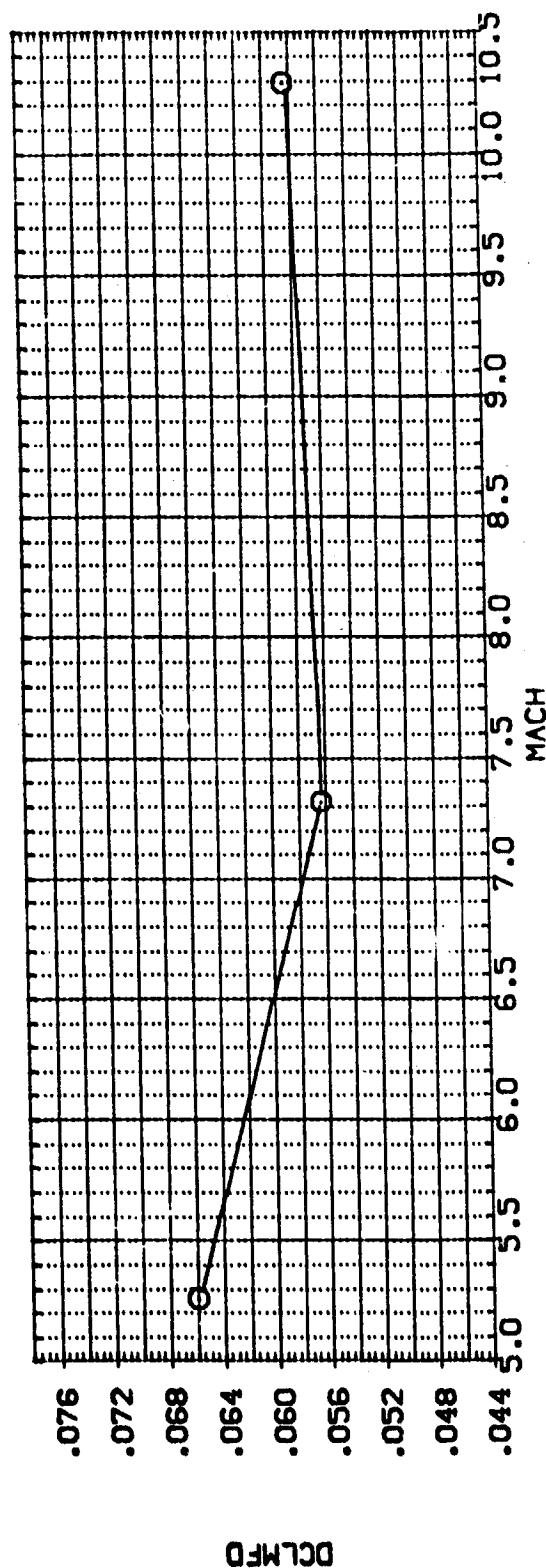


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 35.00

DATA SET SYMBOL: (G80048) \bigcirc CONFIGURATION DESCRIPTION: AVES 3.5-160 BA118 (B10F4CS07M348)(V87E19)(V9R5) DELEVN: -40.000 DELBOF: .000

REFERENCE INFORMATION
 SREF: 2650.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XPRP: 1076.4800 IN.
 YPRP: .0000 IN.
 ZPRP: 400.0000 IN.
 SCALE: .0150

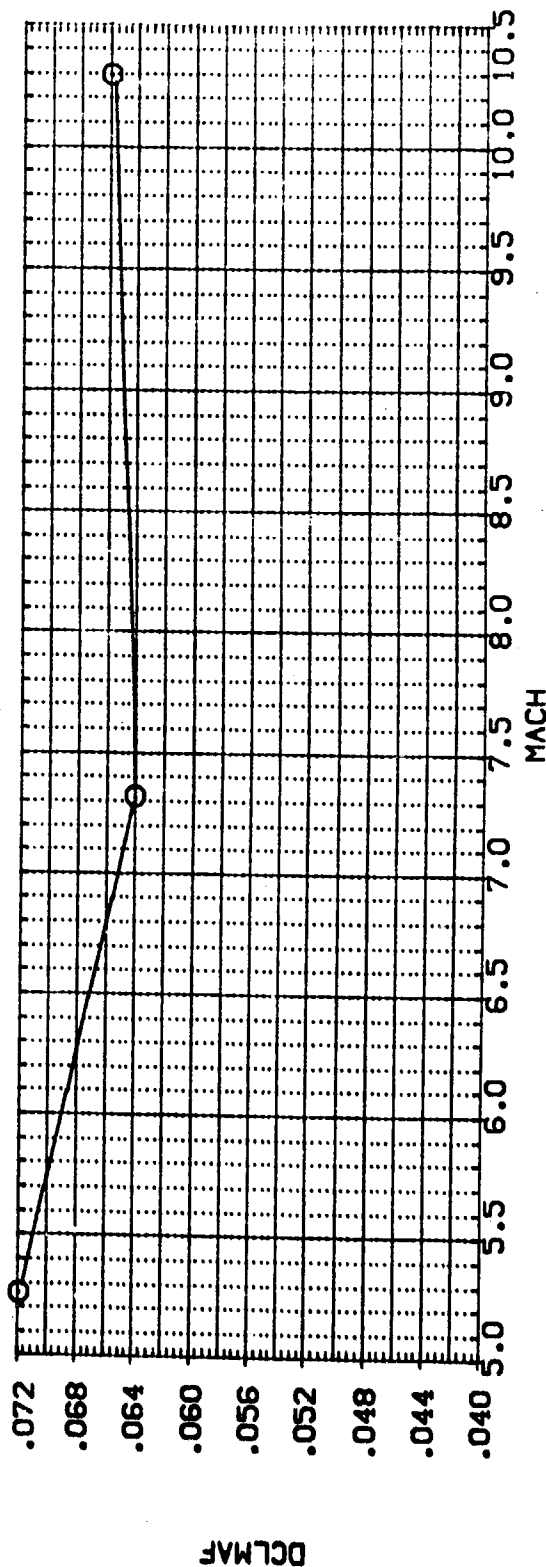
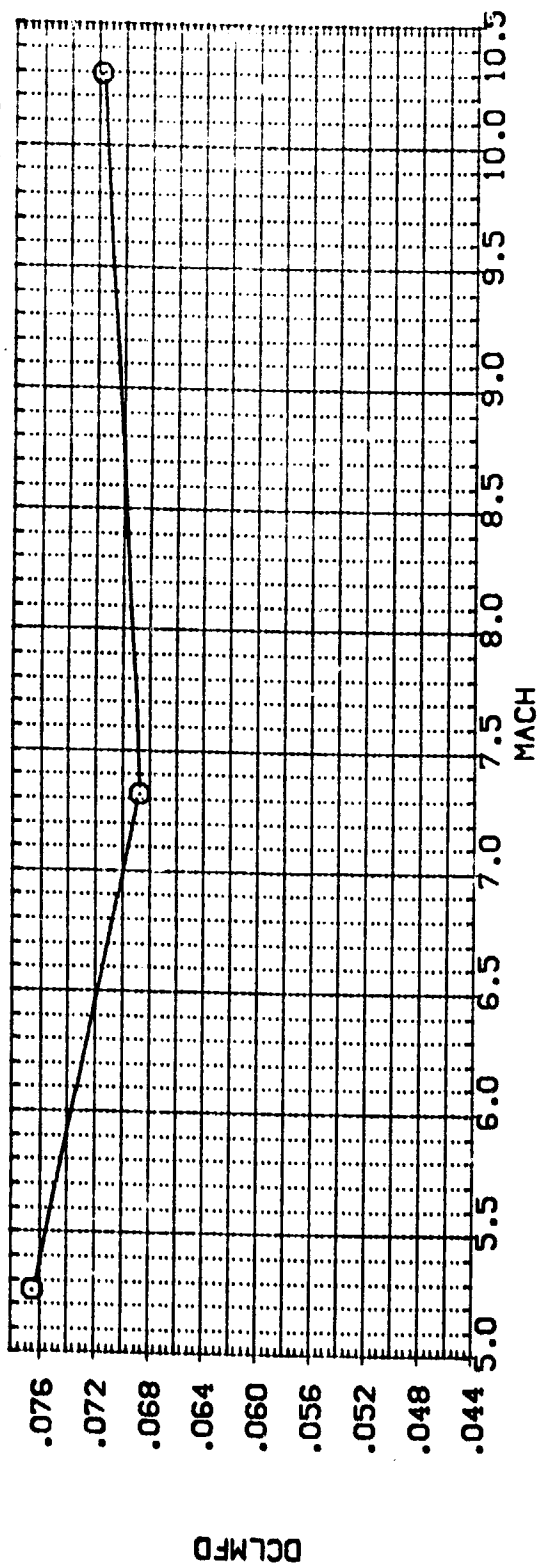


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 39.00

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8100 IN.
 BREF 536.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 10.000 28.000

DATA SET SYMBO. CONFIGURATION DESCRIPTION
 (GBK055) O ARES 3.5-160 CA11B (B10F4C507M3G8)(V67E18)(V5R5)

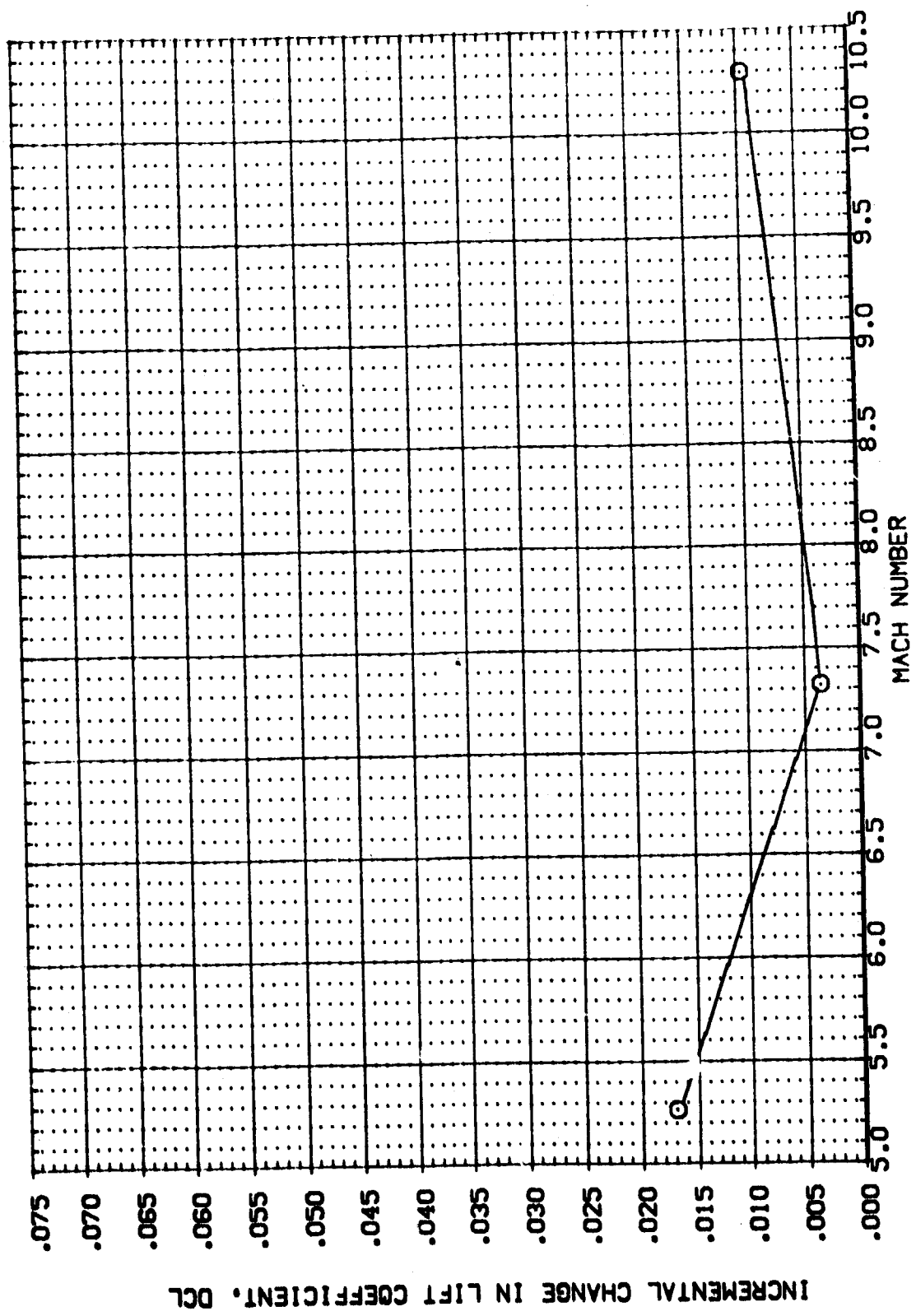


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = .00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELEVN	DELBOF	REFERENCE INFORMATION
(GBR065)	○ ARES 3.5-160 CA118 (B10F4C5D7KQNB)(V87E18)(VSR5)	10.000	28.000	SREF: 2690.0000 SQ.FT.
				LREF: 474.8100 IN.
				BREF: 935.6900 IN.
				VMRP: 1076.4800 IN.
				ZMRP: 400.0000 IN.
				SCALE: 400.0150

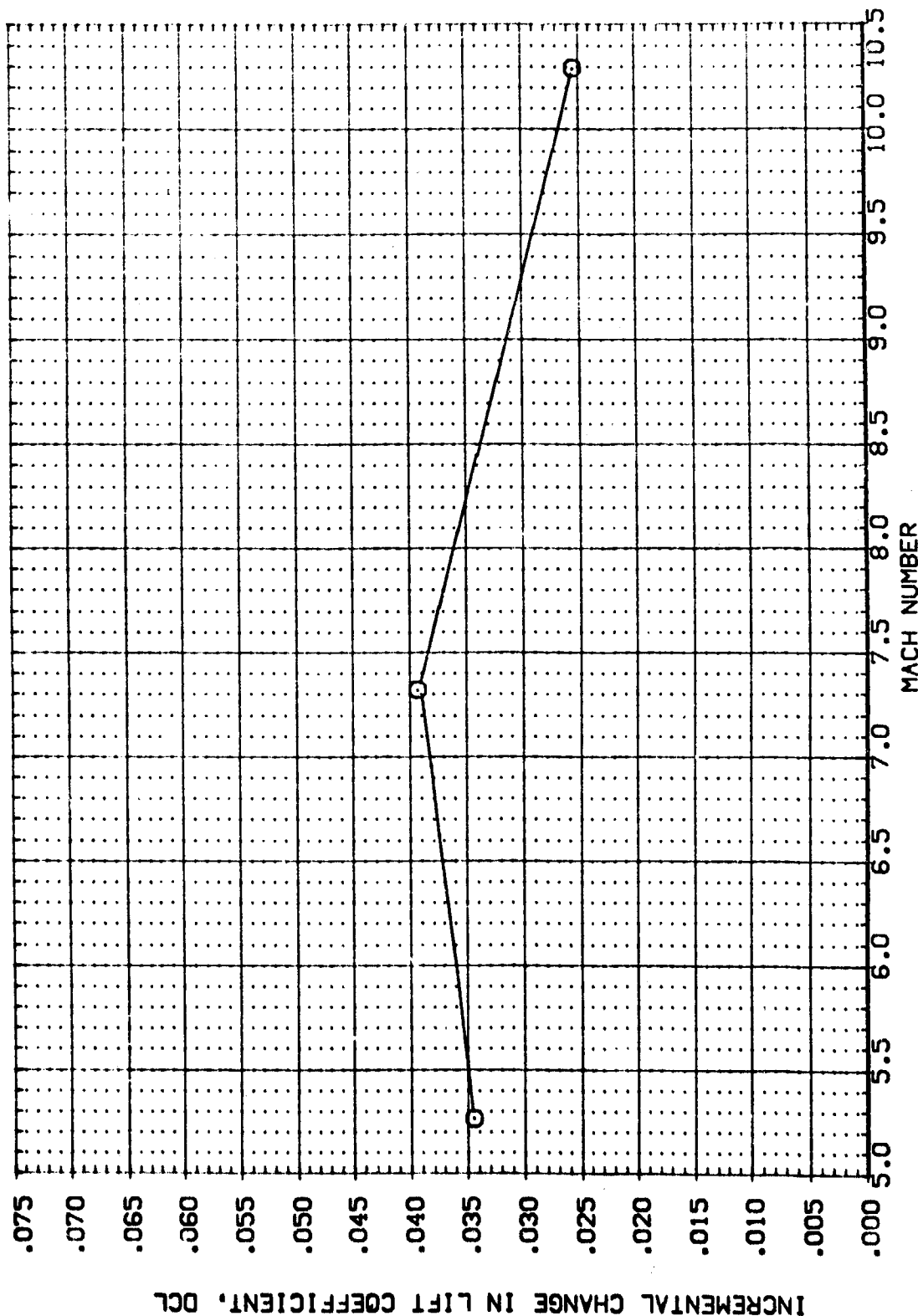


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
(B)ALPHA = 10.00



REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.9100 IN.
 BREF 936.6800 IN.
 YMRP 1076.4800 IN.
 YMRP 0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEW 10.000
 DELBDF 28.000

DATA SET SYMBOL ○
 CONFIGURATION DESCRIPTION
 (GBX065) ○ ARES 3.5-160 GA118 (B10F4CS07H3-8)(V87E10)(V995)

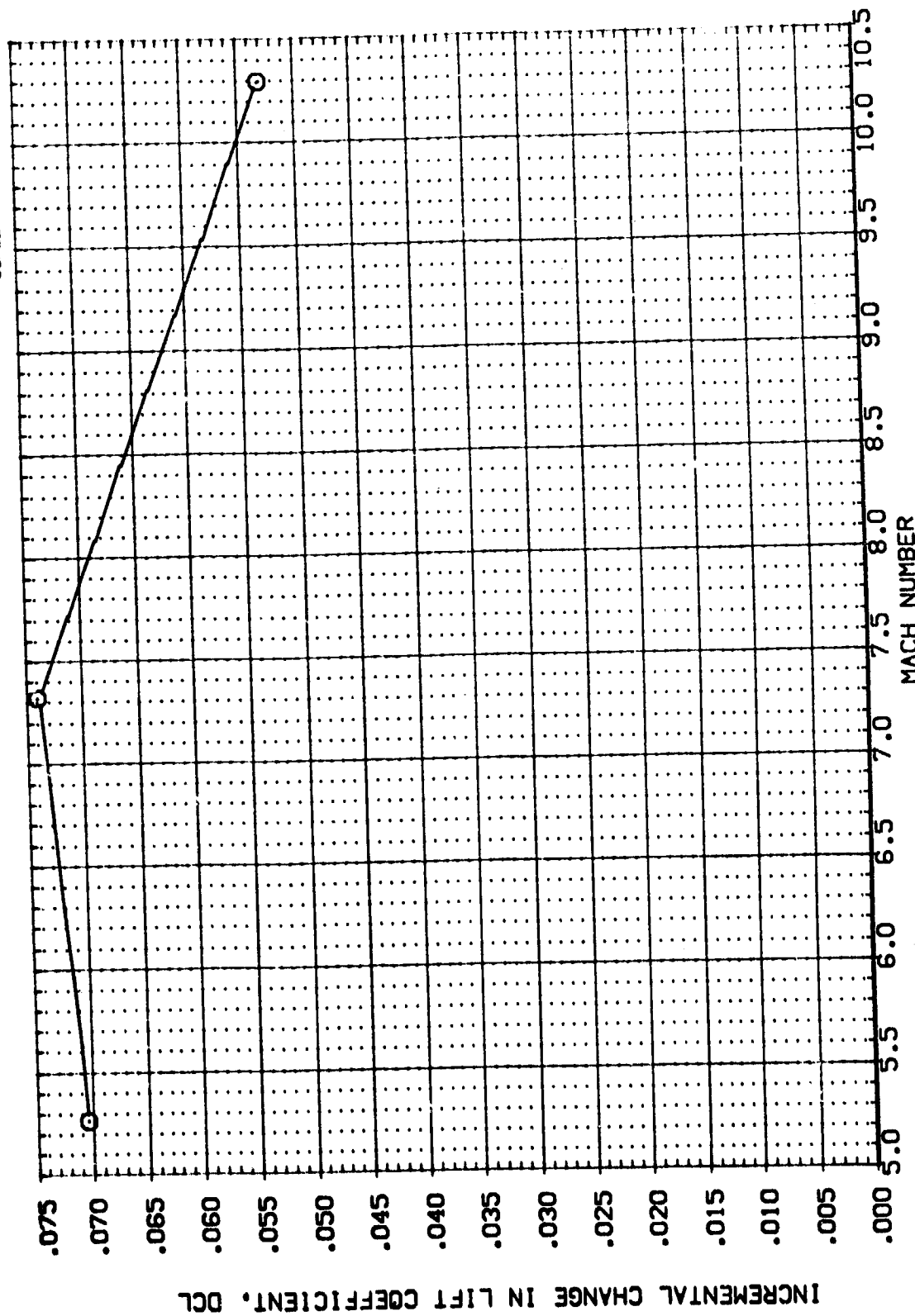


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C)ALPHA = 20.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEW DELBDF
 (93X085) O AYES 3.5-160 DA11B (B10F4C507M348)(V87E18)(V5R5) 10.000 28.000

REFERENCE INFORMATION
 SREF 2690.0000 S.I.F.T.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

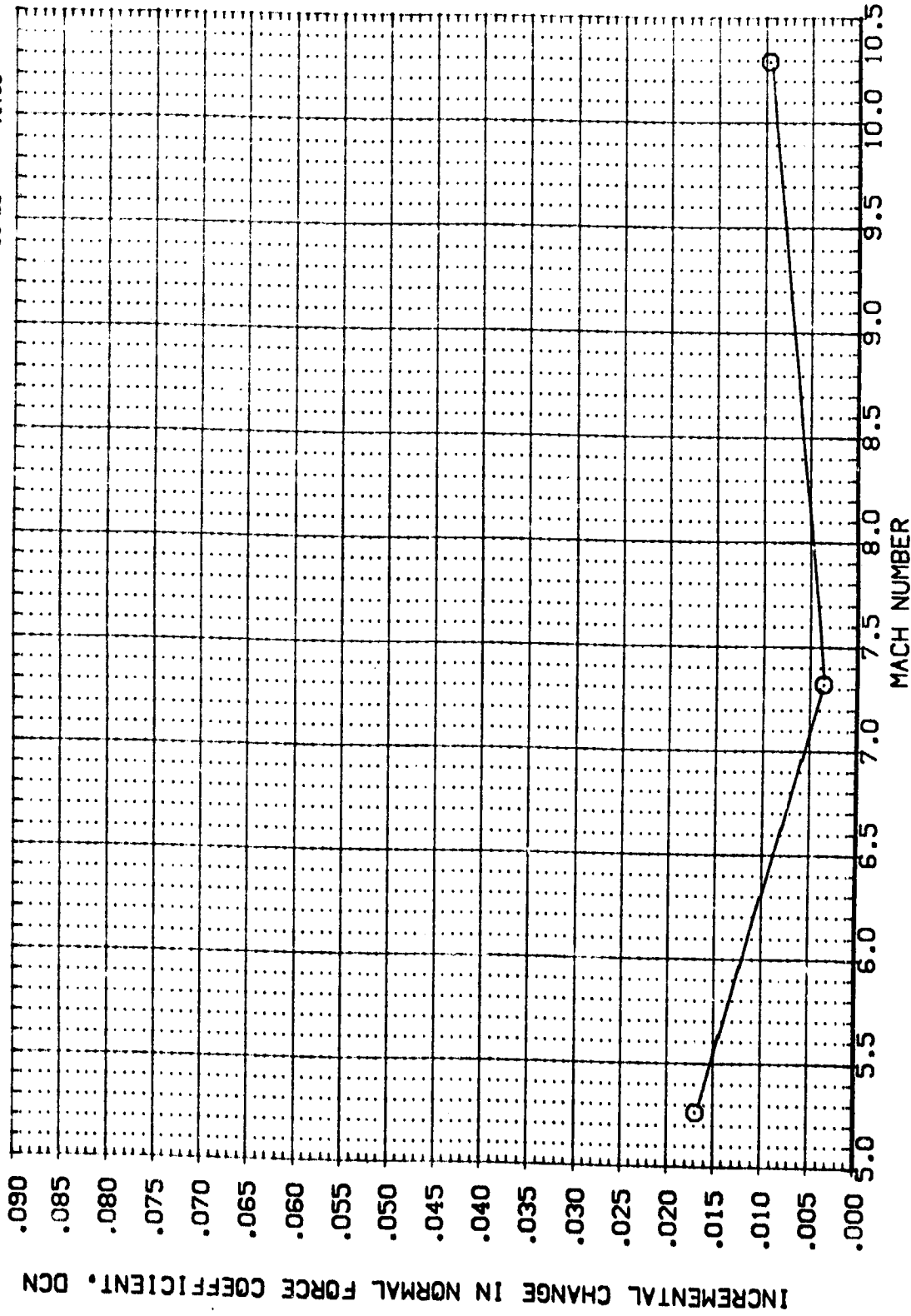


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER
 (ALPHA = .00)

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELEBOF
 10.000 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (GBX065) O AVES 3.5-160 0A118 (B10F4C5D7H3G4B)(V87E18)(V59S5)

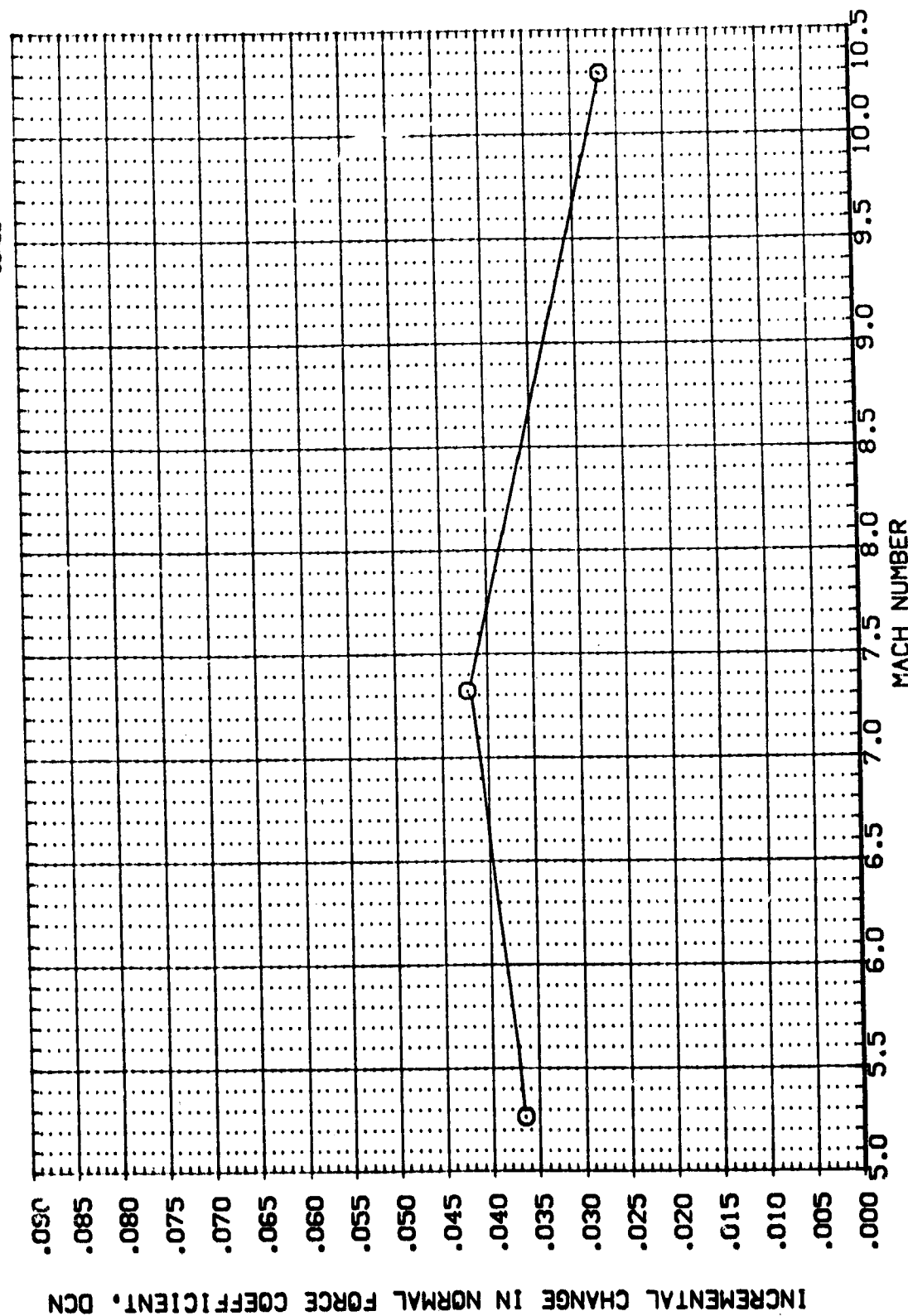


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B)ALPHA = 10.00

DATA SET SYMBOL: 0
 CONFIGURATION DESCRIPTION: AVES 3.5-160 0A11B (B10F4C507H3A8)(V87E18)(V5K5)

DELEVN: 10.000
 DELBOF: 28.000

REFERENCE INFORMATION
 SREF: 2590.0000 SO.FT.
 LREF: 474.8100 IN.
 BREF: 936.5800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

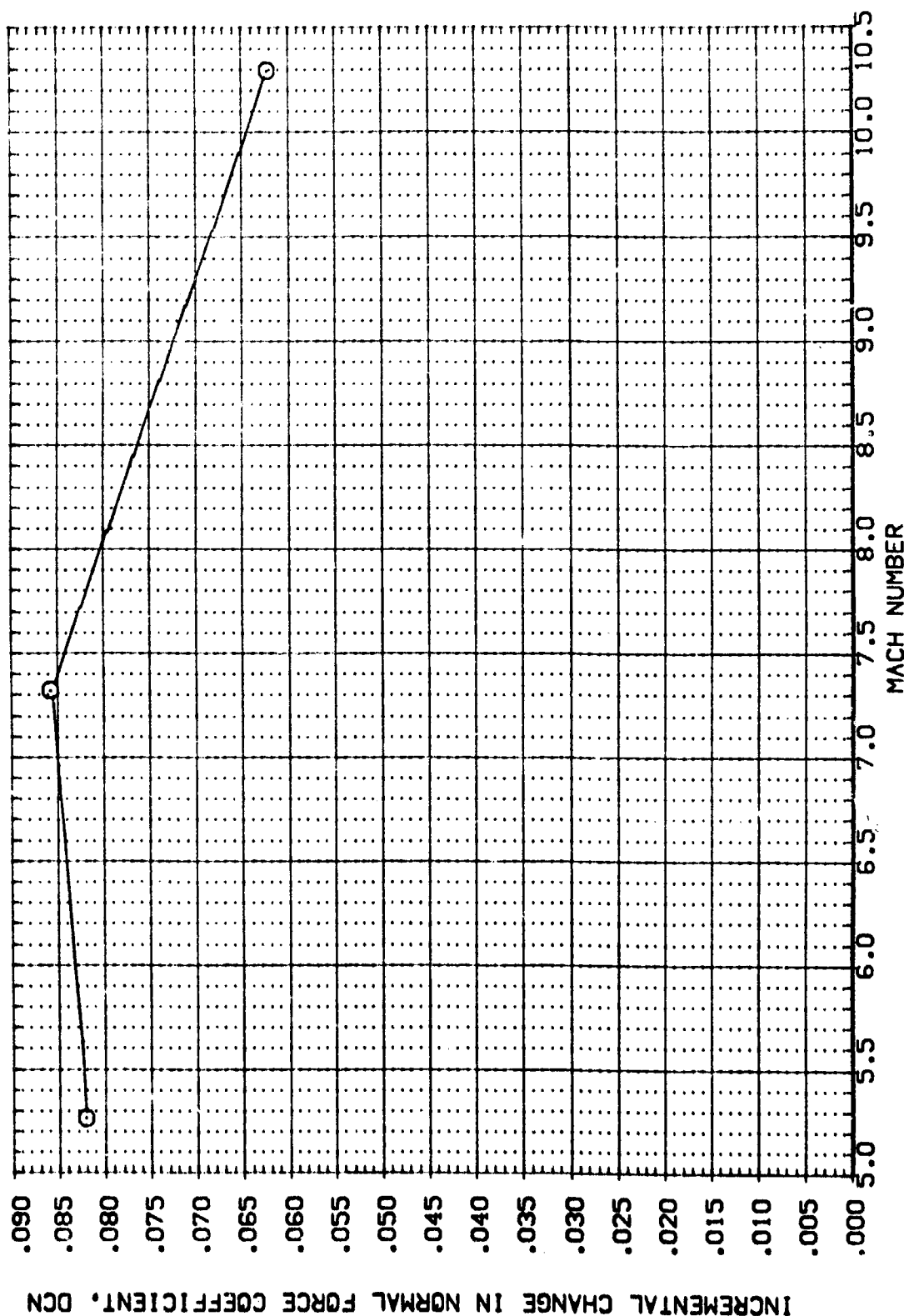


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 20.00



REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 926.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN 10.000 DELBOF 28.000

CONFIGURATION DESCRIPTION

DATA SET SYMBOL (GEOS) 0 AYES 3.5-160 DA11B (B10F4C507K3N8)(V87E18)(V5R5)

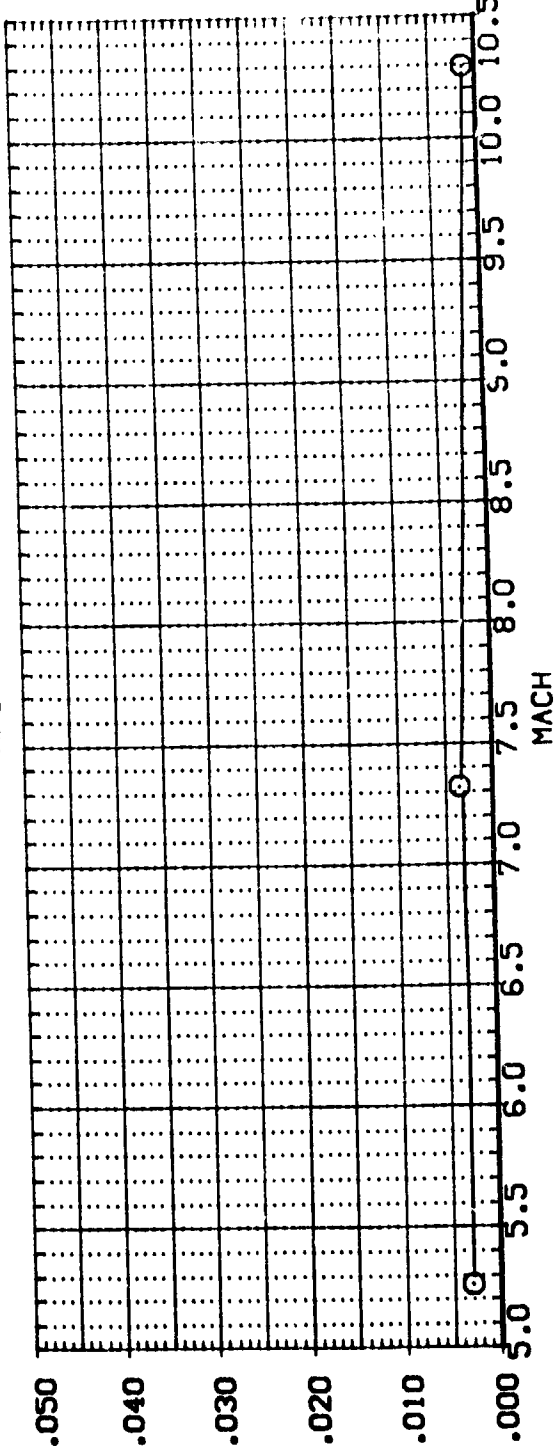
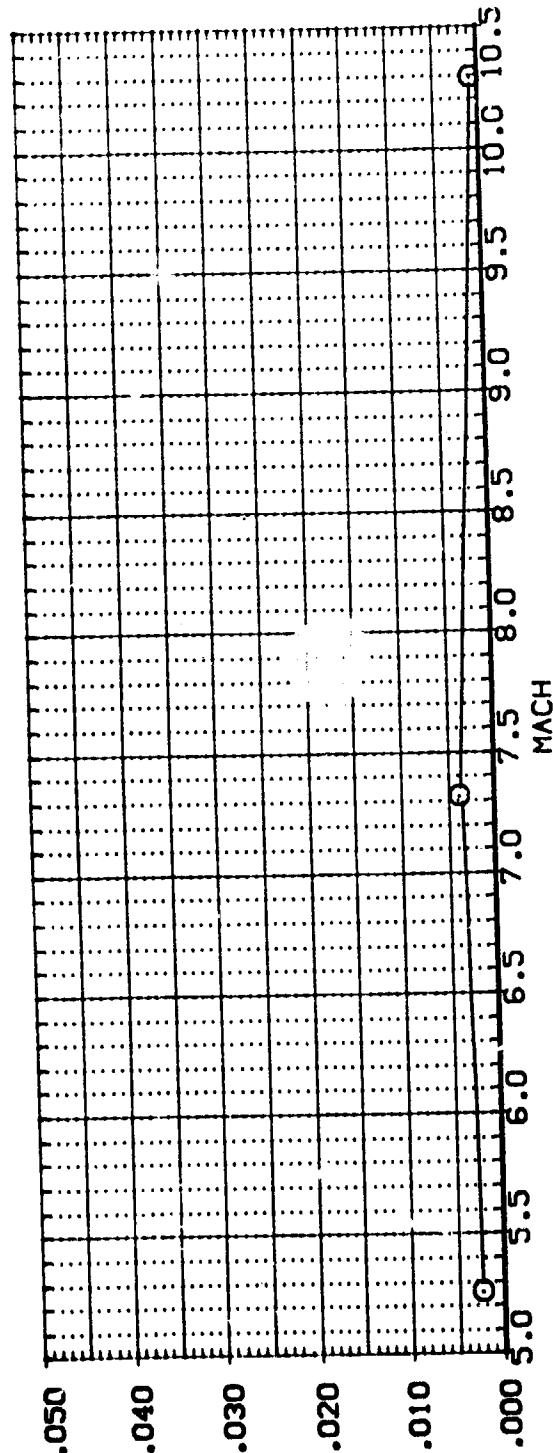


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(ALPHA) = .00

DATA SET SYMBOL (G3X065) ○ CONFIGURATION DESCRIPTION AVES 3.5-160 DA11B (B10F4C507H348)(V87E18)(V57F5) DELX'VN 10.000 DELBOF 28.000

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XREF 1076.4800 IN.
 YREF 600.0000 IN.
 ZREF 400.0000 IN.
 SCALE 0.150

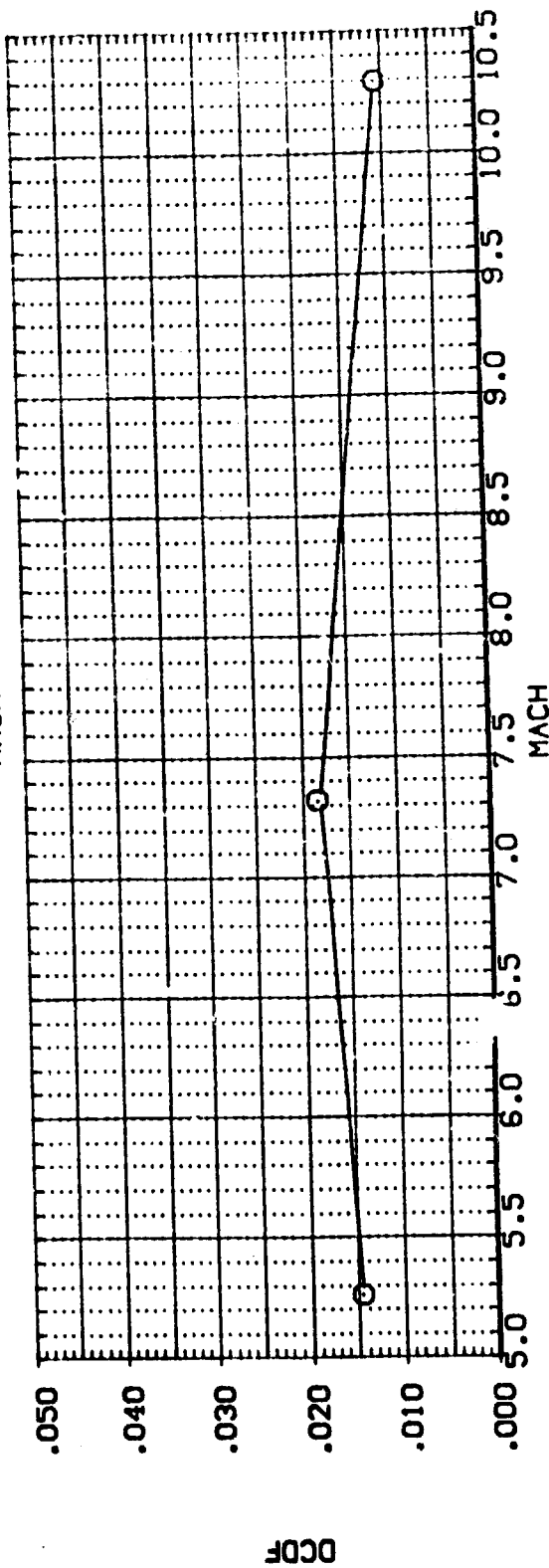
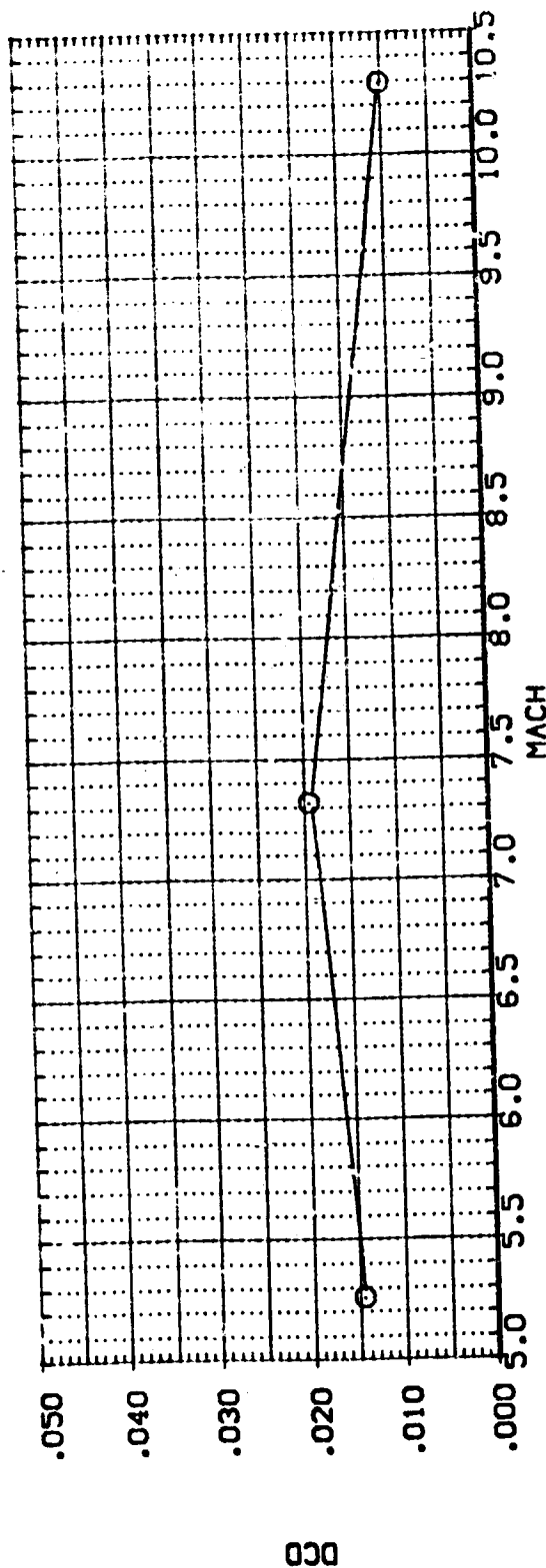


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 10.00



REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 10.000 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (GROSS) O AYES 3.5-160 0A11B (810F4C5074348)(V87E18)(VSR5)

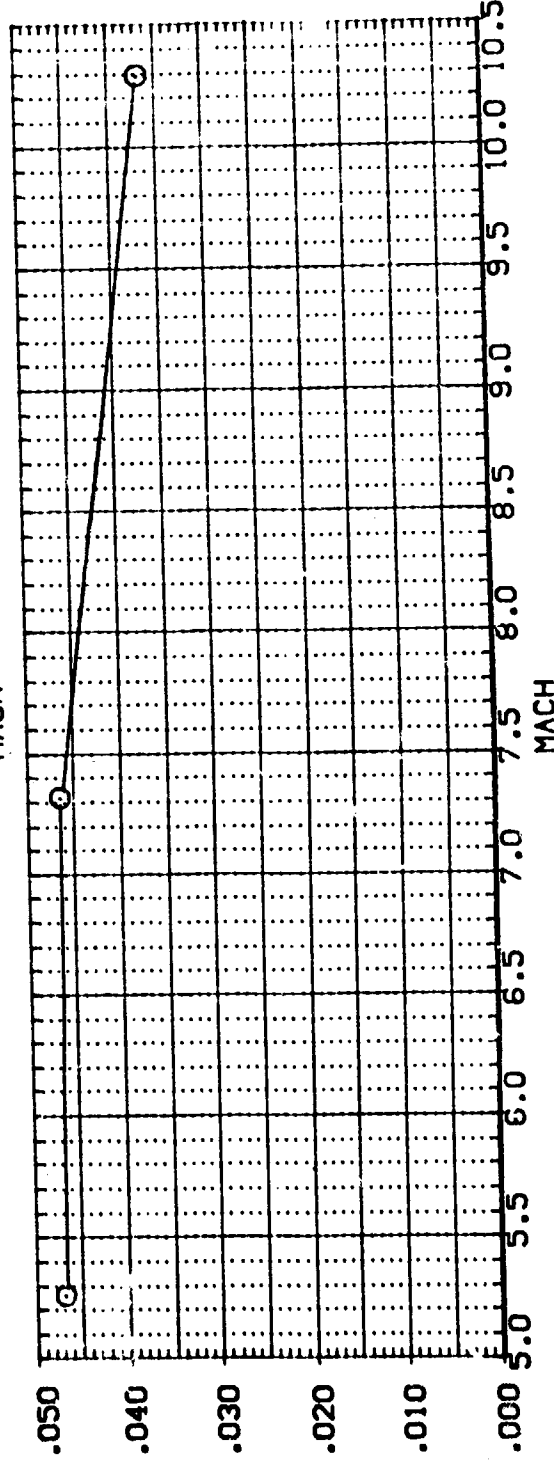
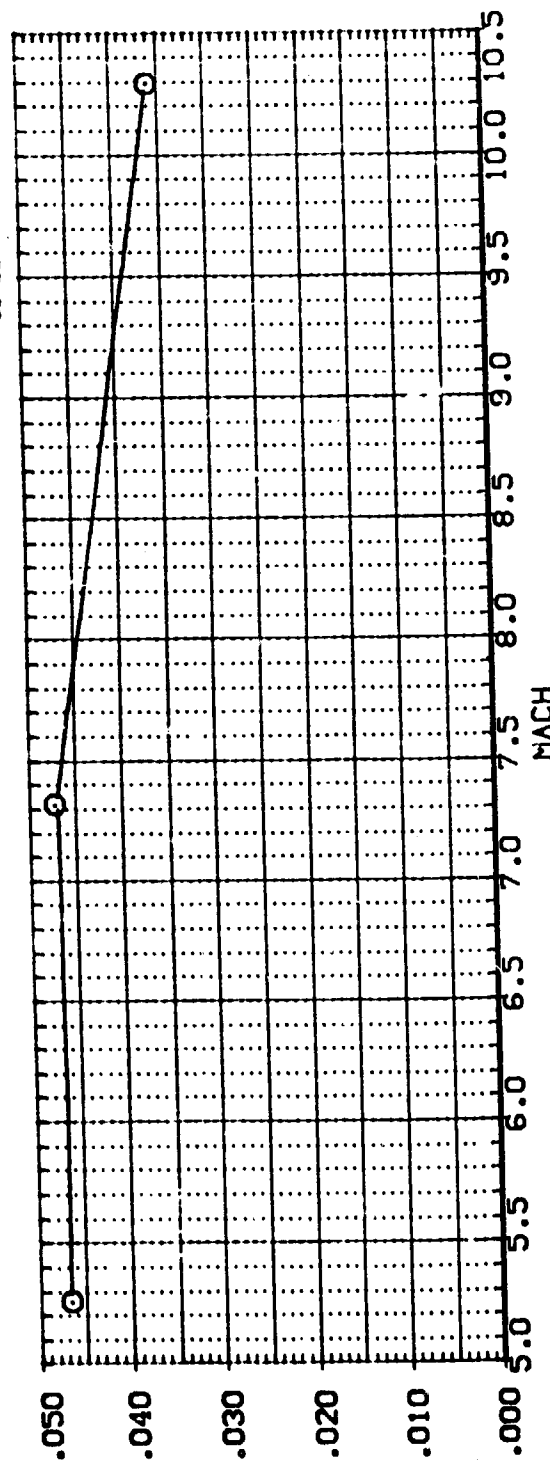


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER

(C)ALPHA = 20.00

DATA SET SYMBOL (GBX055) ○

CONFIGURATION DESCRIPTION
AVES 3.5-160 CALIB (B10F4C507H04B)(V87E18)(V5R5)

DELEVN 10.000
DELBOF 28.000

REFERENCE INFORMATION
SPREF 2690.0000 SC.FT.
LREF 474.2100 IN.
BREF 936.1900 IN.
XTRP 1076.4800 IN.
YTRP .0000 IN.
ZTRP 400.0000 IN.
SCALE .0150

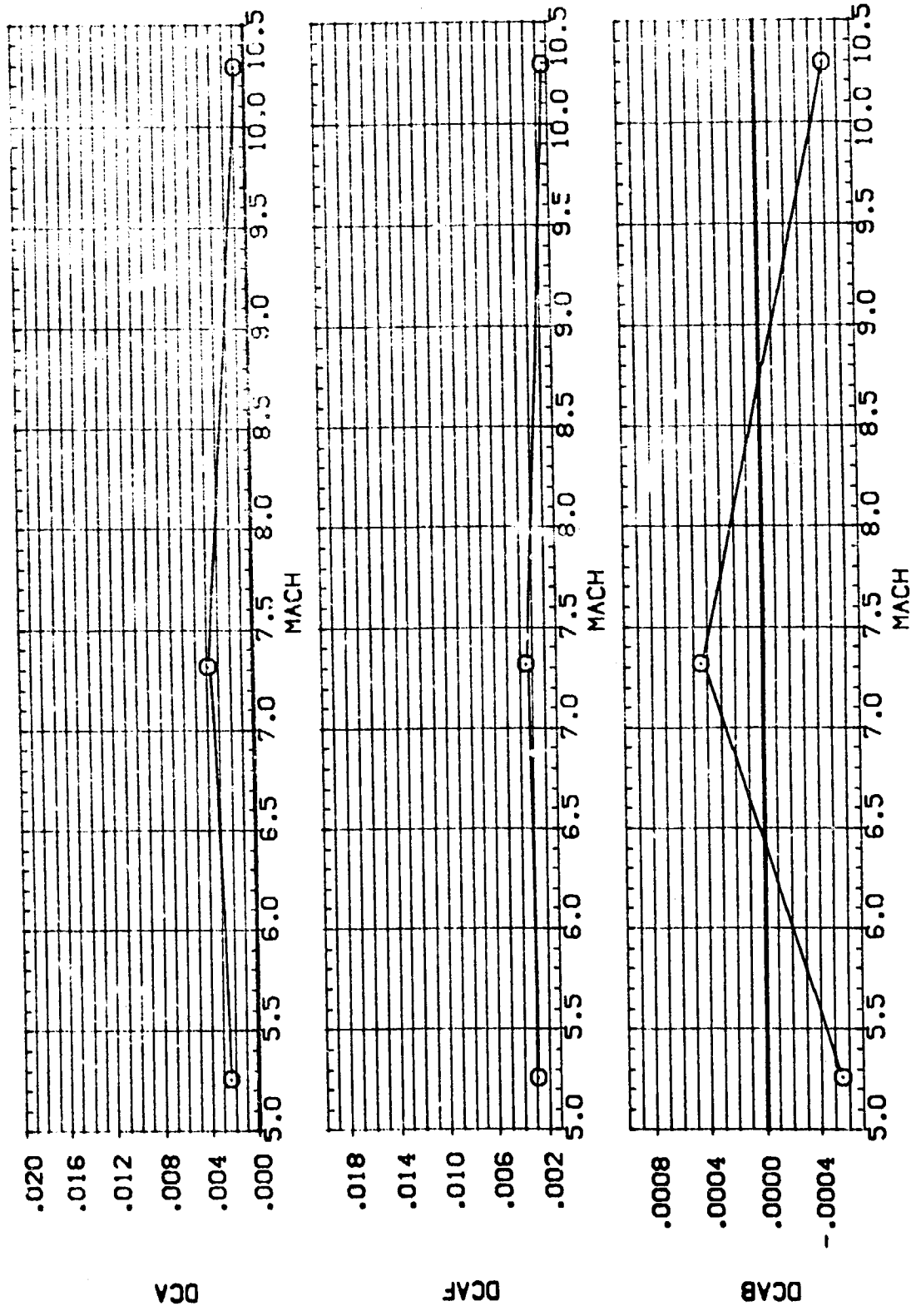


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

CALPHA = .00

REFERENCE INFORMATION

SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.5800	IN.
YMRP	1076.4800	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

DELEVN DELBOF

DELEVN	10.000
DELBOF	28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(080085) ○ AYES 3.5-160 CA11B (B10F4C507M3V8)(V87E18)(V5R5)

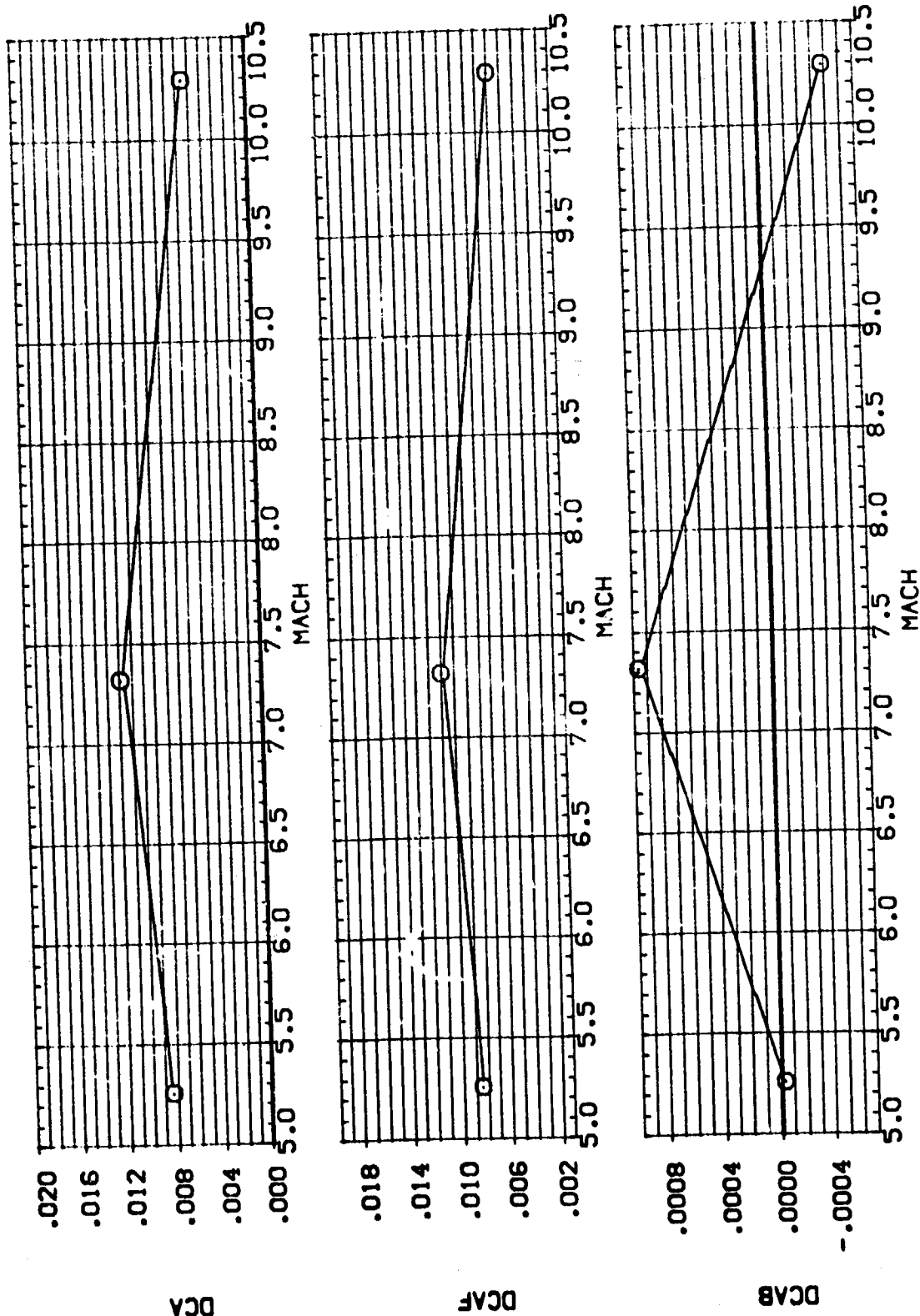


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 10.00

DATA SET SYMBOL: \bigcirc CONFIGURATION: DESCRIPTION: VES 3.5-160 04118 (B10F4C507KGN8)(V87E18)(VSRS) DELEVN DELBOF 10.000 28.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE 0.150

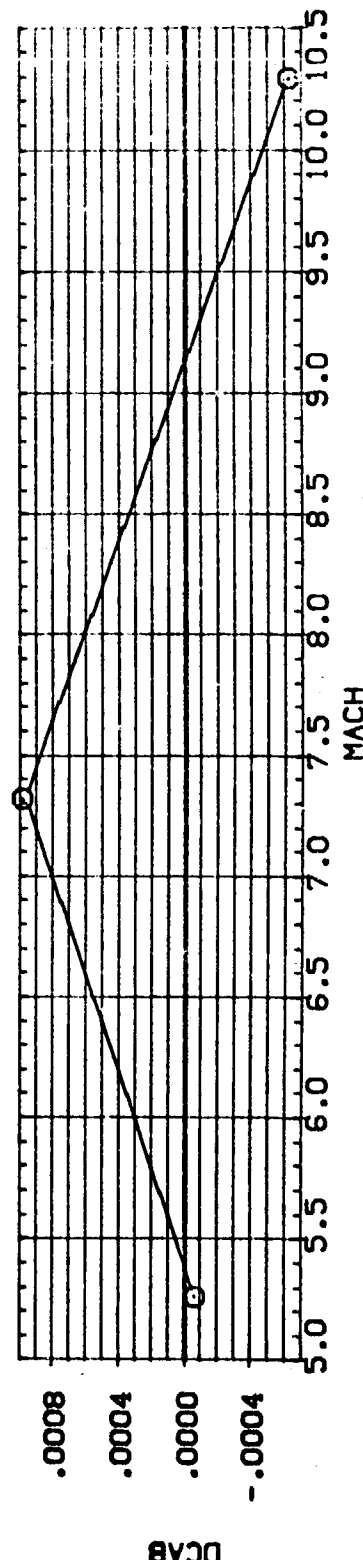
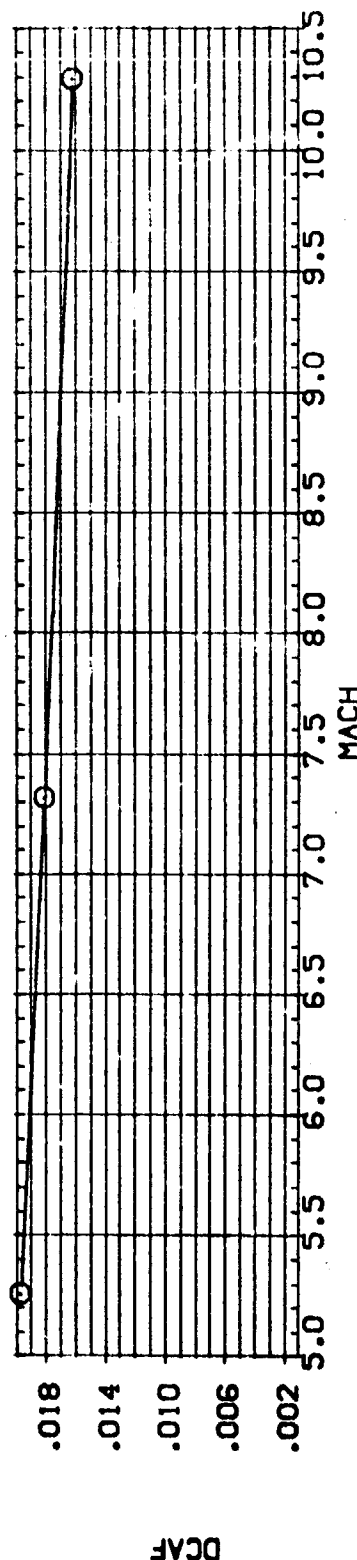
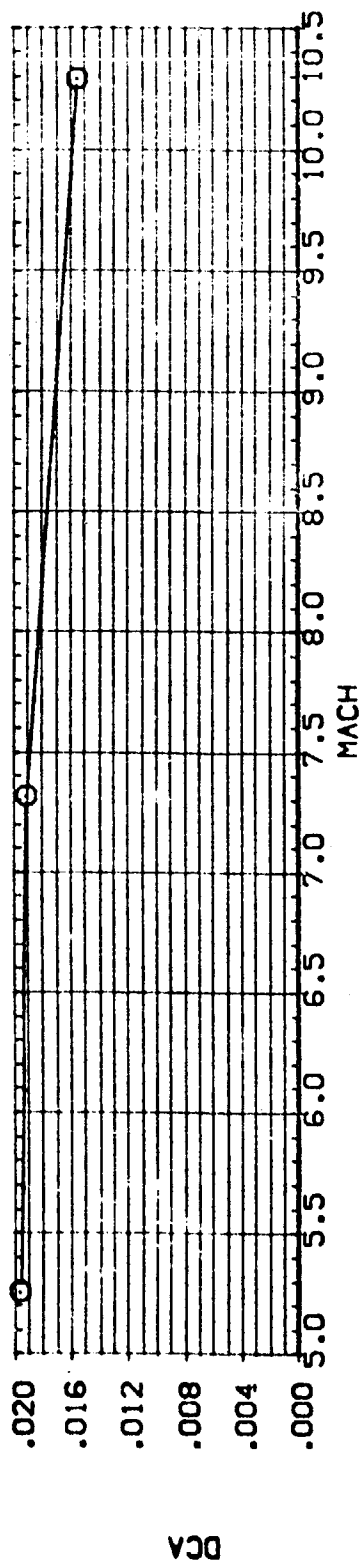


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 20.00

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8100 IN.
 BREF 936.6900 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 10.000 28.000

DATA SET SYMBO. CONFIGURATION DESCRIPTION
 (GB0055) ○ ARES 3.5-160 CA11B (B10F4C5D7K3N8)(V87E18)(V5F5)

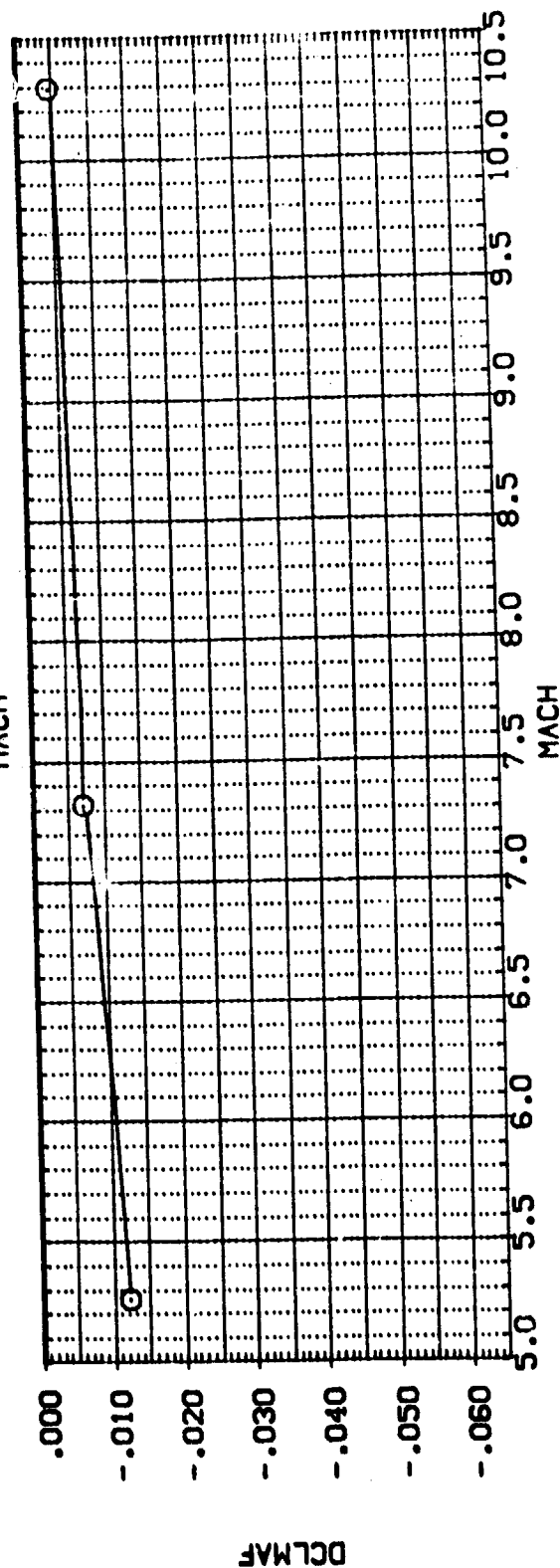
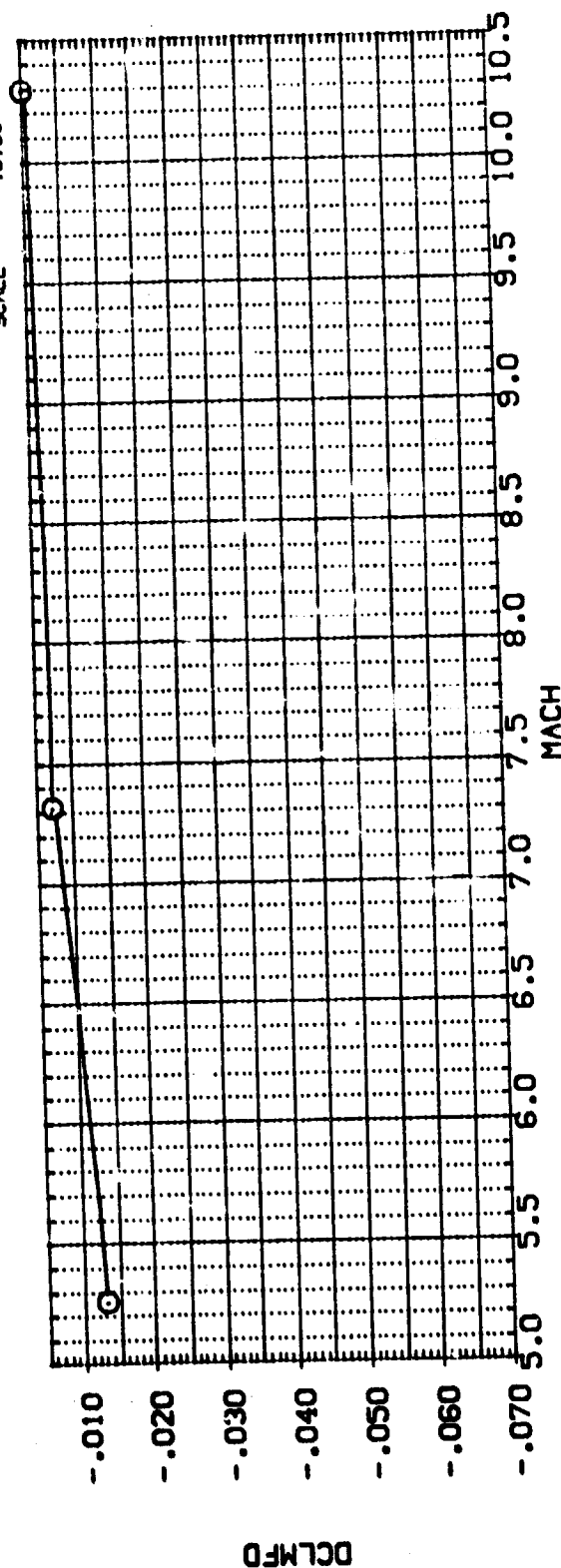


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(AJALPHA = .00

DATA SET SYMBOL: \bigcirc CONFIGURATION DESCRIPTION: AVES 3.5-160 DALLB (810F4C507H3B8)(V87E18)(V5RS) DELEVN DELROF 10.000 28.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

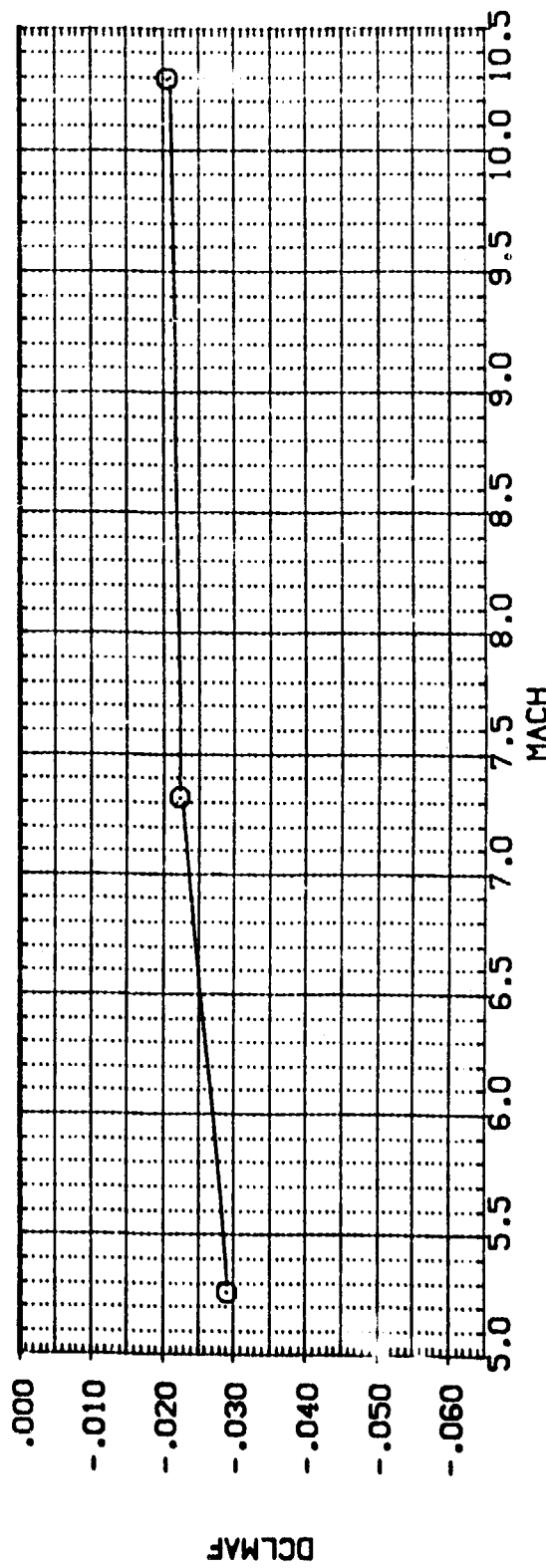
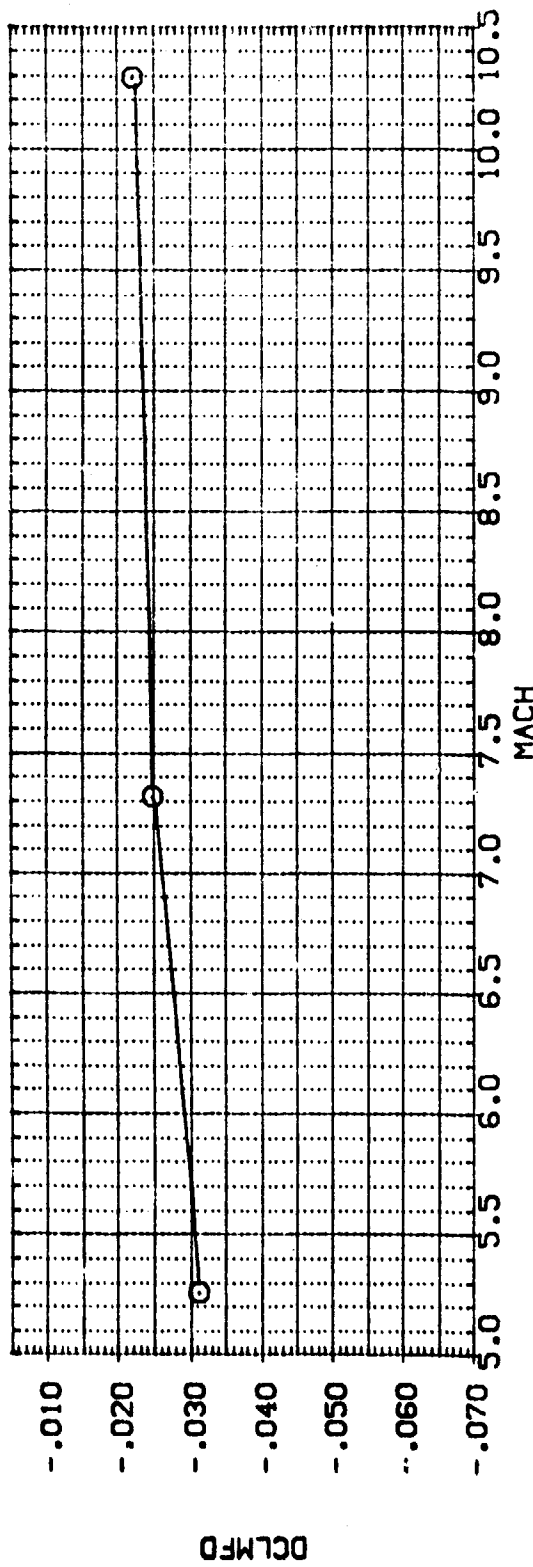


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (8) ALPHA = 10.00

REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 YMRP 1076.4800 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEW 10.000
 DELBOF 28.000

DATA SET SYMBOL (680055) ○
 CONFIGURATION DESCRIPTION
 AVES 3.5-160 OA11B (810F4C307M34B) (V87E1B) (V5R5)

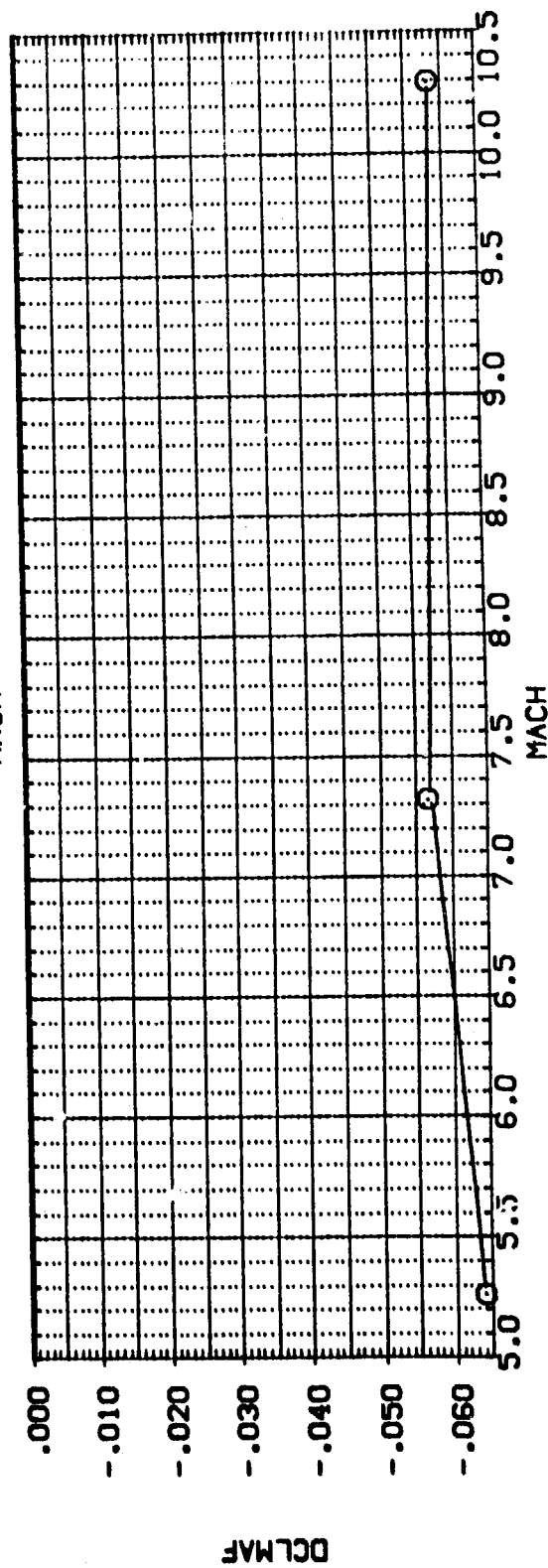
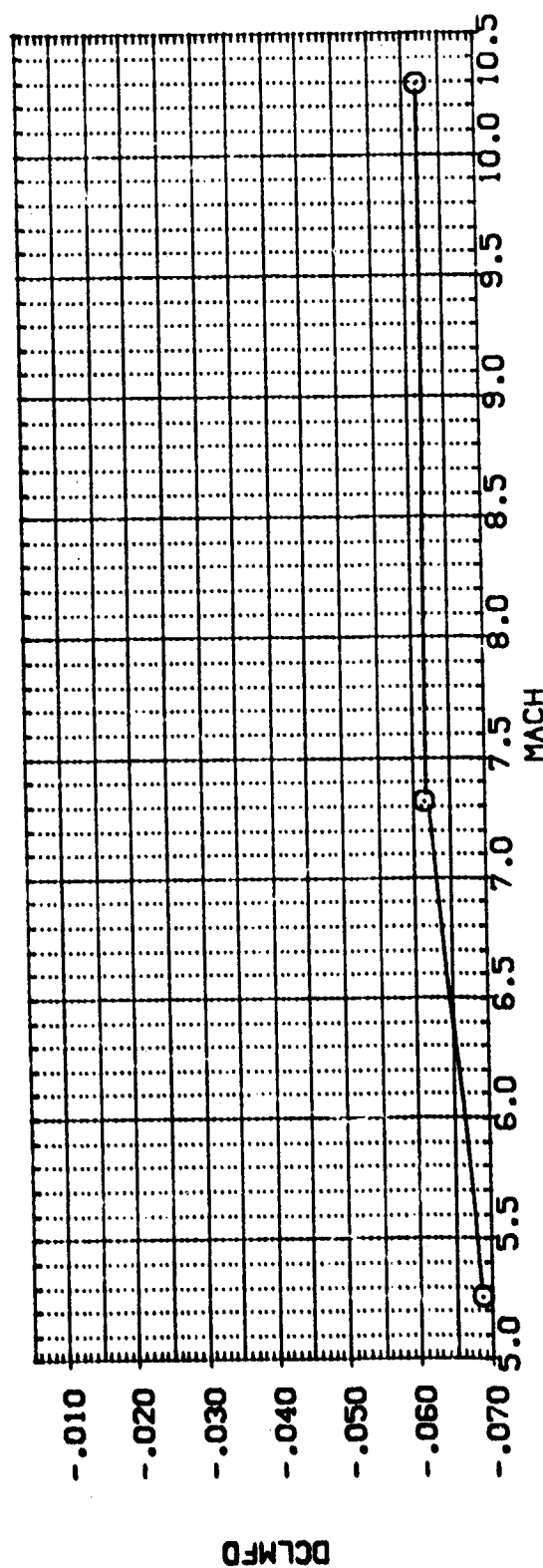


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(CJALPHA = 20.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF
 (G80049) ○ ARES 3.5-160 DA118 (B10F4C507H349)(V87E18)(V55R5) 10.000 28.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.8900 IN.
 YARP 1076.4800 IN.
 ZARP 400.0000 IN.
 SCALE .0150

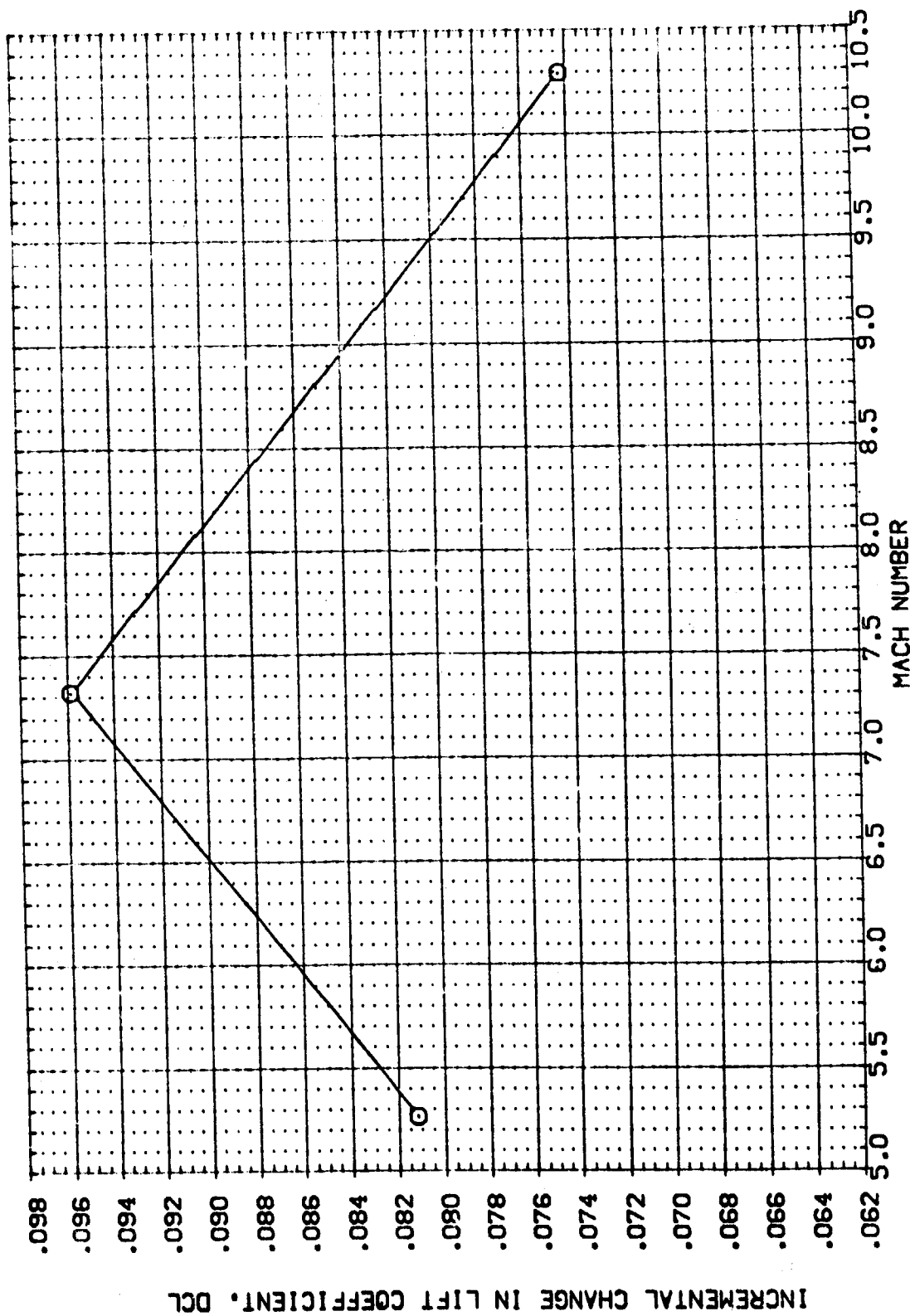


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION DELEVN DELBOF
 (GBK049) ○ ARES 3.5-160 BA11B (B10F4CSD7H3N8)(V87E18)(V5R5) 10.000 28.000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

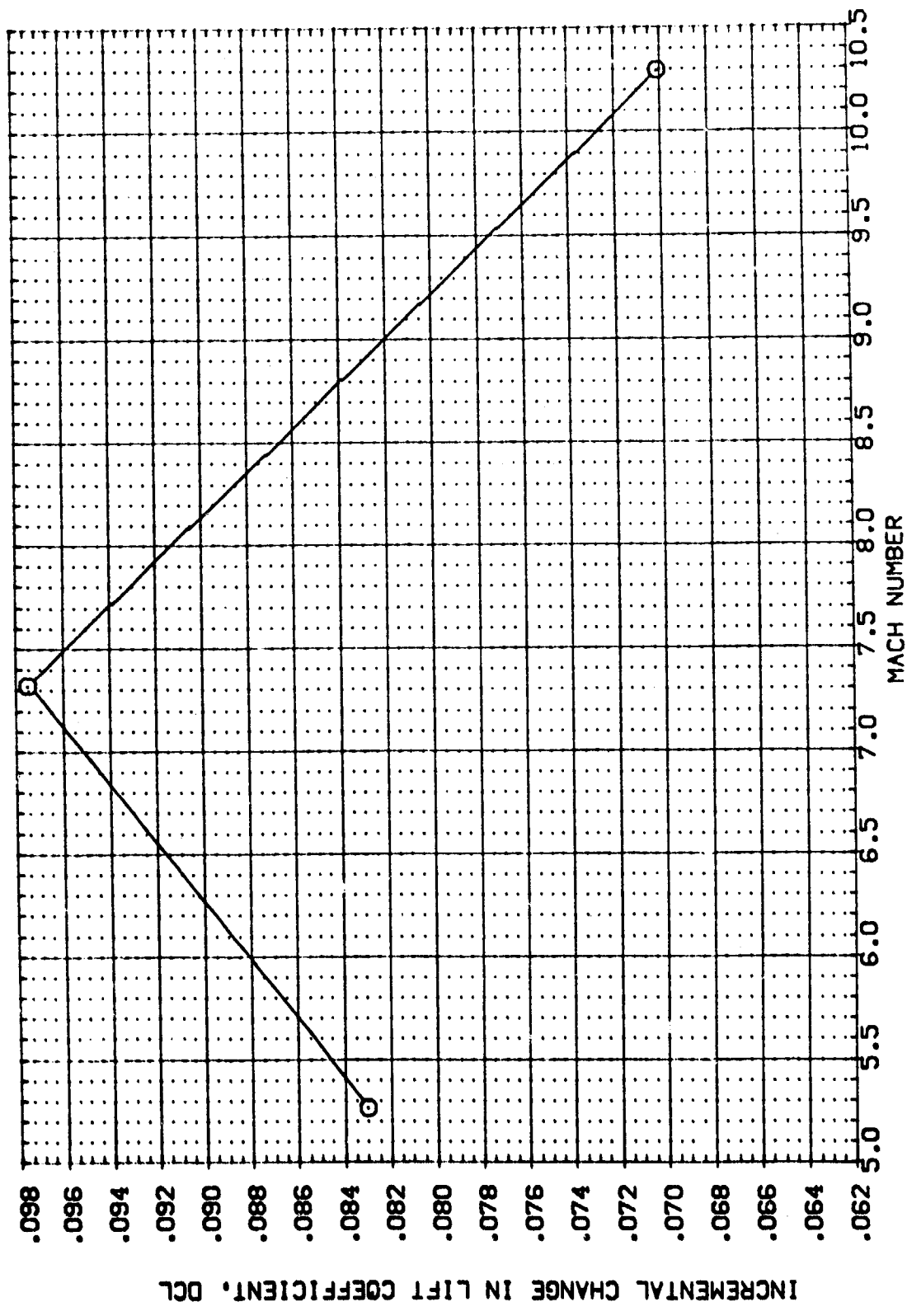


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 35.00

REFERENCE INFORMATION

SREF	2650.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
YMRP	1076.4800	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

DELEVN DELBDF
10.000 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(GB0049) ○ ARES 3.5-160 CAL18 (B10F4C507G4B)(V87E18)(V5K5)

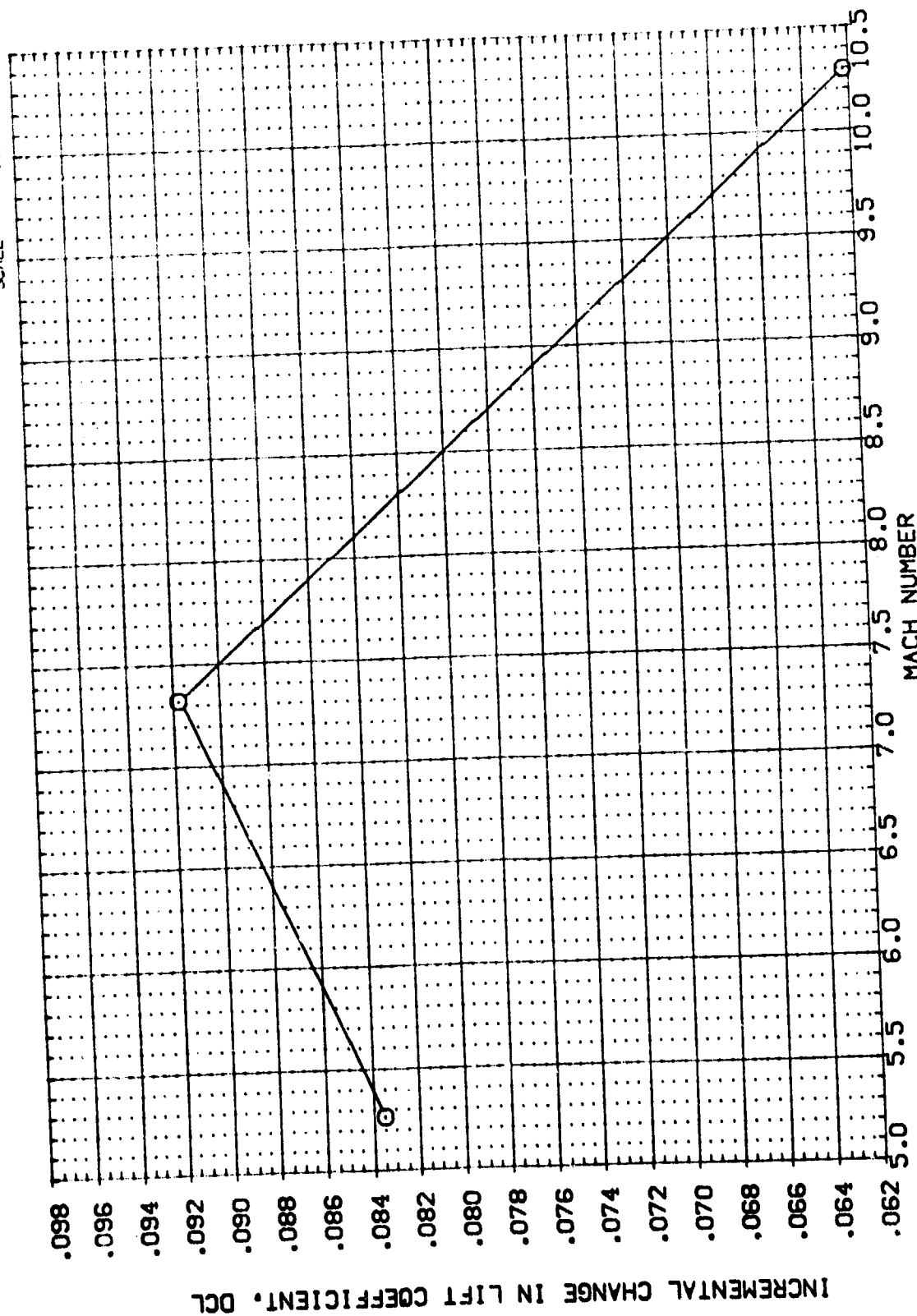


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C)ALPHA = 39.00



REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XPRP 1076.4800 IN.
YPRP 400.0000 IN.
ZPRP 400.0000 IN.
SCALE .0150

DELEW DELBOF
10.000 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(580049) ○ ARES 3.5-160 0A11B (B10F4C507H34B)(V87E1B)(V59S)

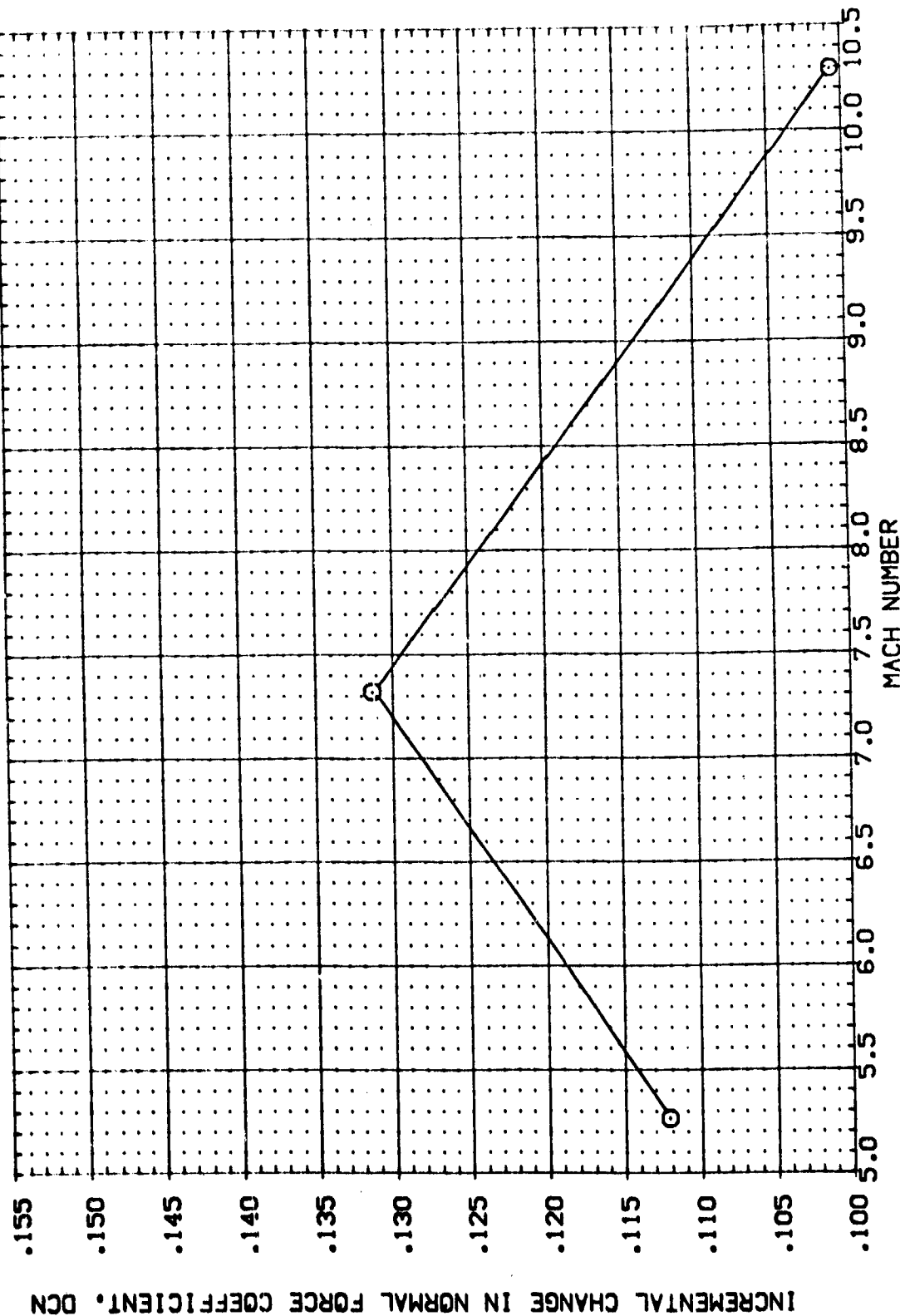


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(α)ALPHA = 30.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(GB049) ○ ARES 3.5-160 CA118 (B10F4C507G3N8)(V87E18)(V5R5)

DELEVN DELBOF
10.000 28.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XREF 1076.4800 IN.
YREF 400.0000 IN.
ZREF 400.0000 IN.
SCALE 0.150

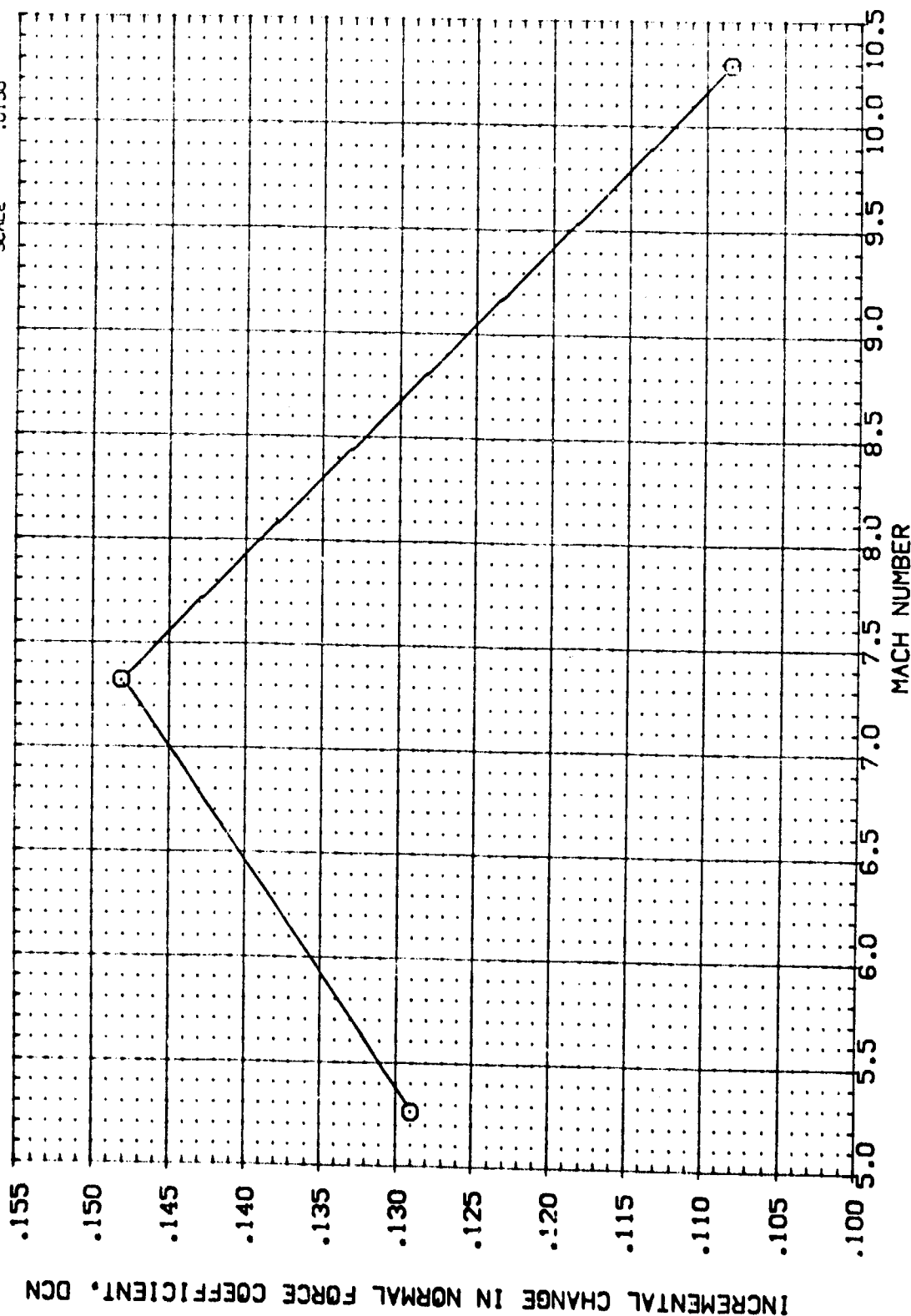


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 35.00

REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	474.8100	IN.
BREF	935.6800	IN.
XMRP	1076.4800	IN.
YMRP	0000.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

DATA SET SYMBOL
(GB0049)

CONFIGURATION DESCRIPTION
MES 3.5-160 DA118 (B10F4C507G08)(V87E18)(V5R5)

DELEVN
10.000

DELBDF
28.000

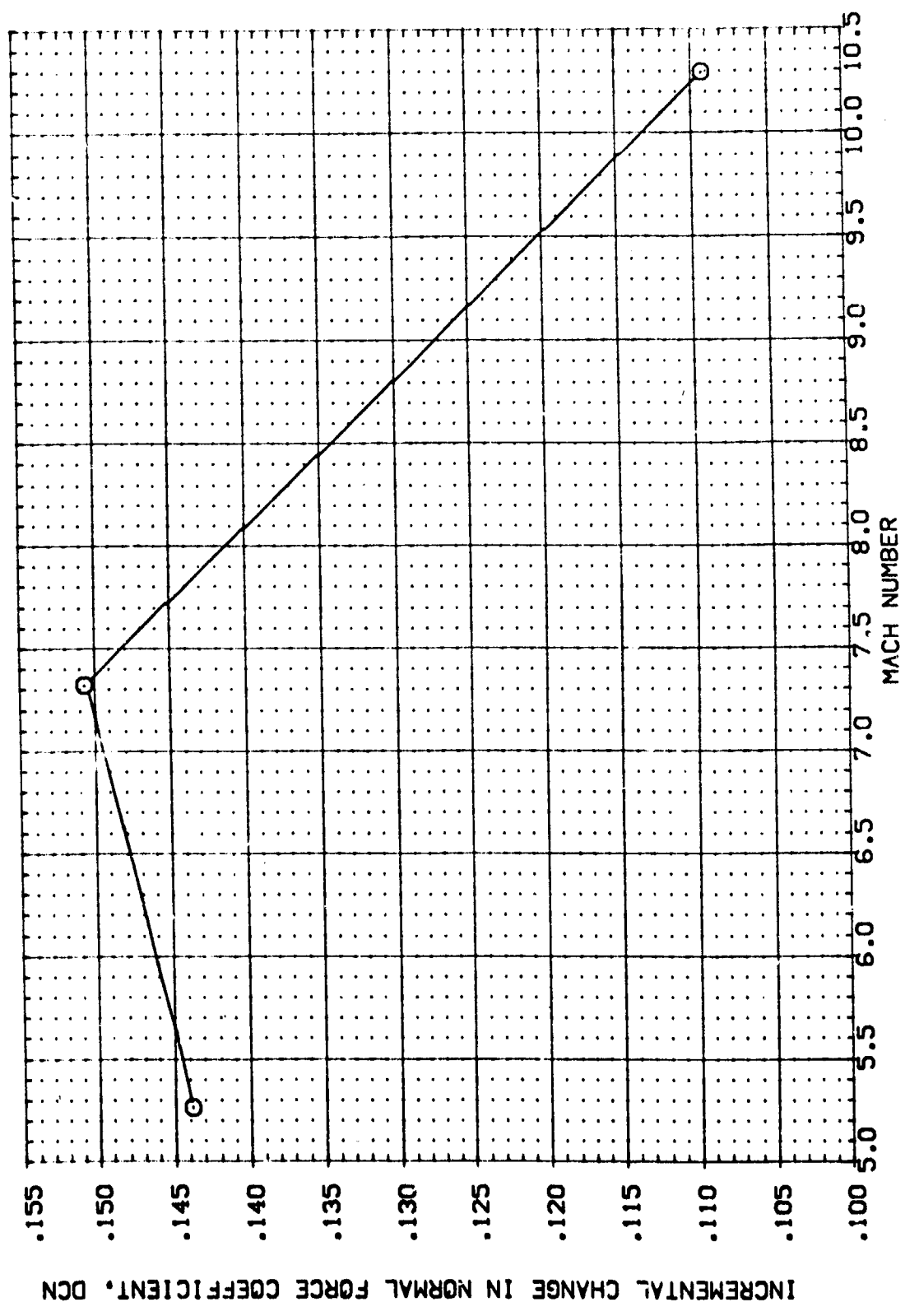


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 39.00

DATA SET SYMBOL: (GB4049) \bigcirc ARES 3.5-160 CALIB (B10F4C50703-8)(V87E18)(V59S) DELEVN 28.000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 0.0000 IN.
 ZMRP 400.0000 IN.
 SCALE 0.0150

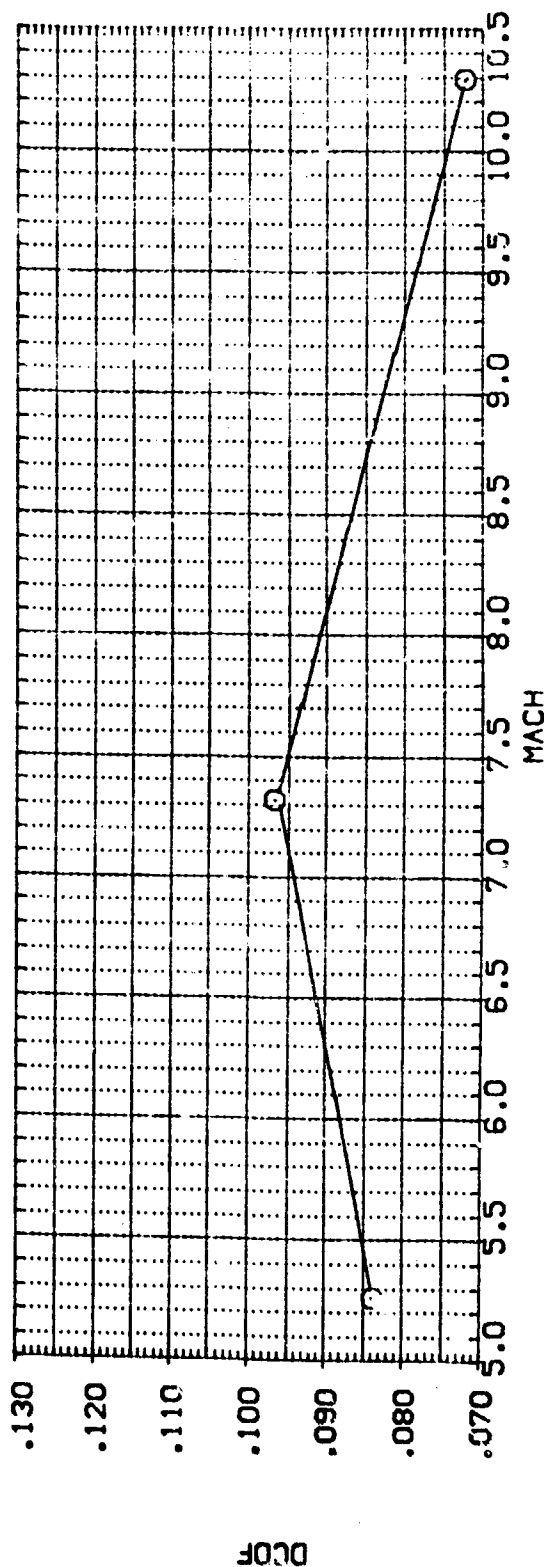
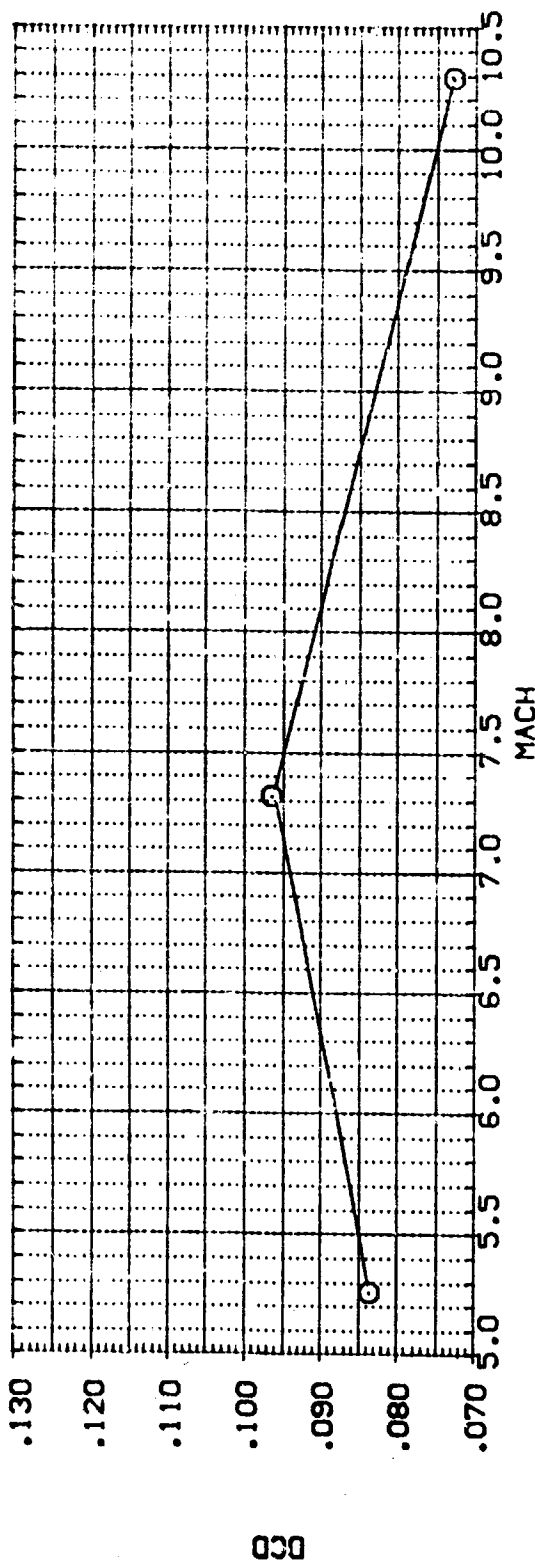


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(α)ALPHA = 30.00

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	
BREF	936.6800	
XPRP	1076.4800	
YPRP	.0000	
ZPRP	400.0000	
SCALE	.0150	

DELEW DELBOF

DELEW	10.000	28.000
-------	--------	--------

DATA SET SYMBOL (G30049) ○

CONFIGURATION DESCRIPTION

ANES 3.5-160 DA11B (B10F4C507H34B)(V87E18)(V55S)

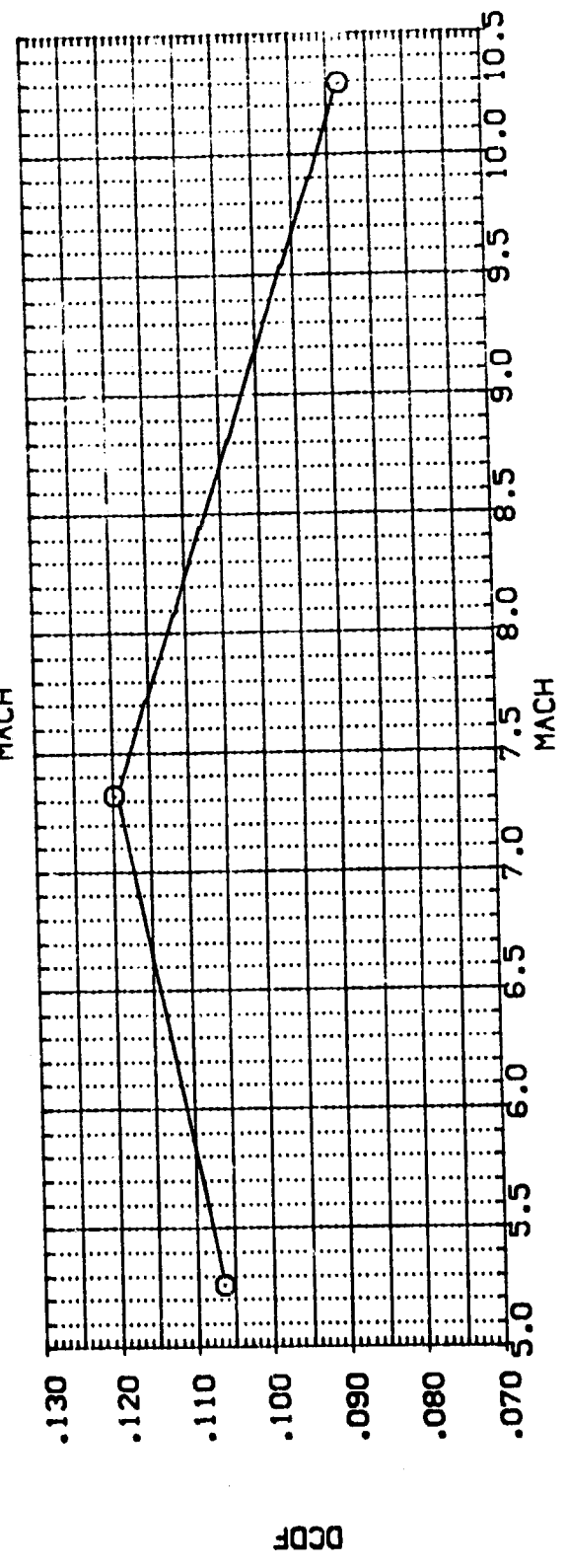
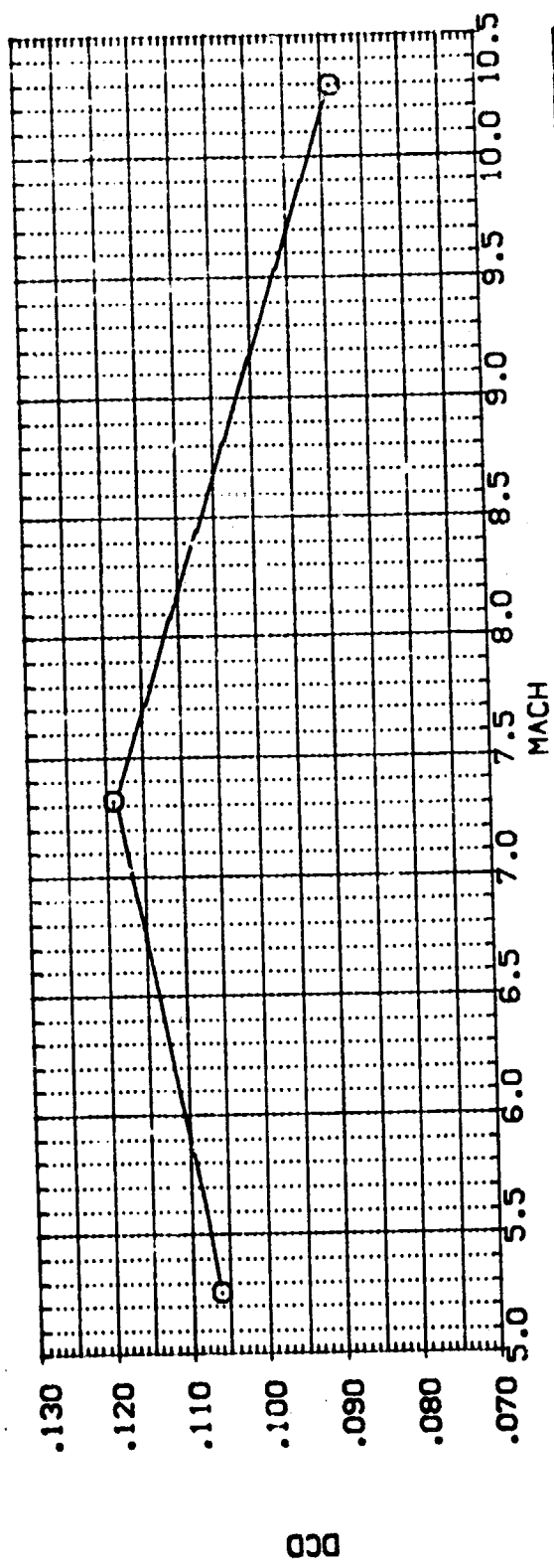


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER

(B) ALPHA = 35.00

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 10.000 28.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (C30X49) ○ APES 3.5-160 OA11B (B10F4C507K348)(V87E18)(V5R5)

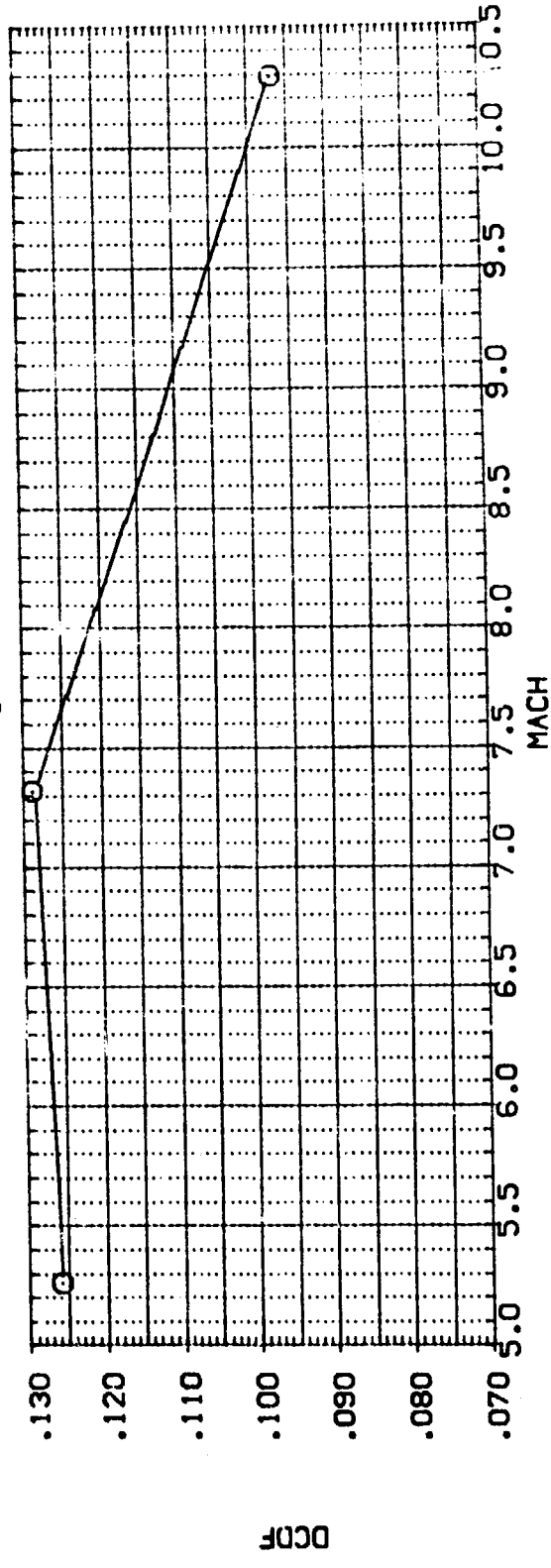
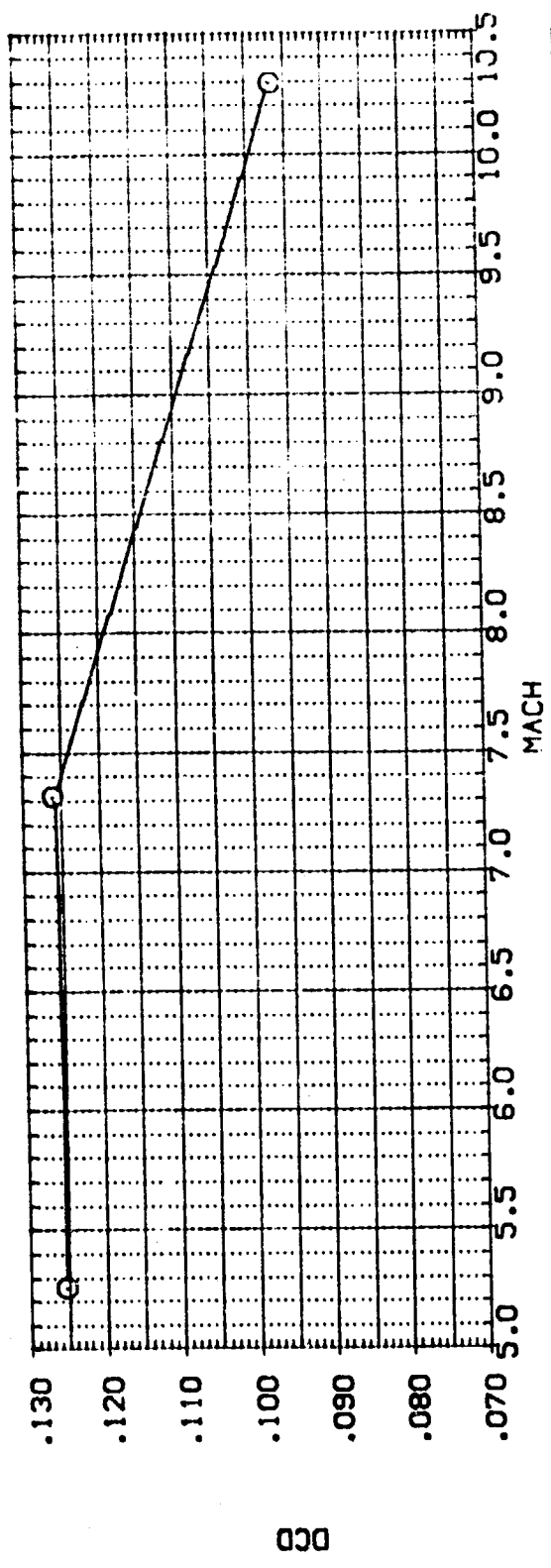


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 39.00

REFERENCE INFORMATION
 SREF 2690.0000 52.57.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XREF 1076.4800 IN.
 YREF 400.0000 IN.
 ZREF 400.0000 IN.
 SCALE .0150

DELEW DELBOF
 10.000 28.000

DATA SET SYMBOL (GBX049) ○
 CONFIGURATION DESCRIPTION
 ASES 3.5-160 DA118 (B1D74C507G348)(V87E18)(V59S)

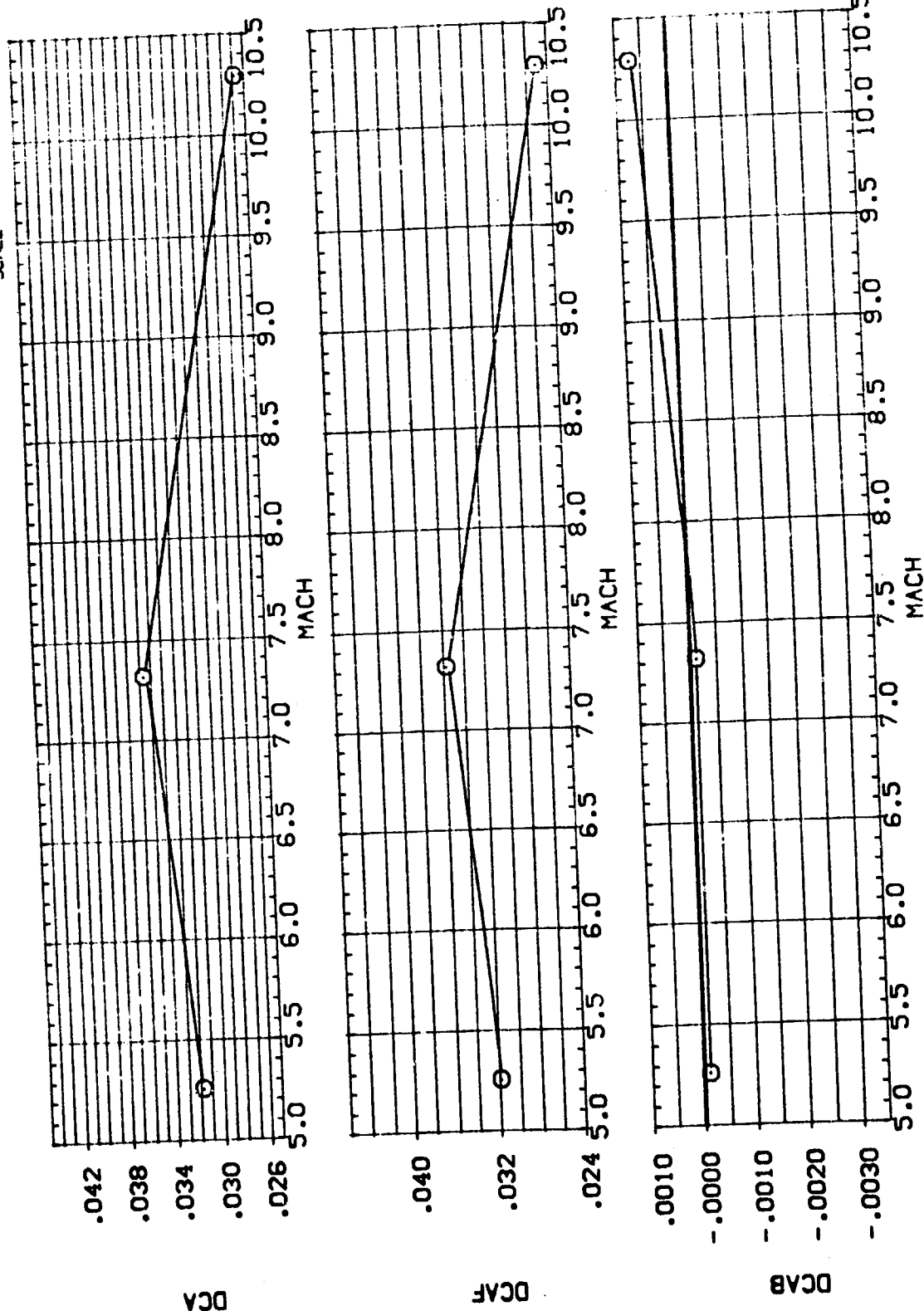


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

DATA SET SYMBOL: (GBX049) \bigcirc CONFIGURATION DESCRIPTION: AMES 3.5-160 CALIB (B10F4C507K3N8)(V87E18)(V5K5) DELEVN: 10,000 DELBOF: 28,000

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

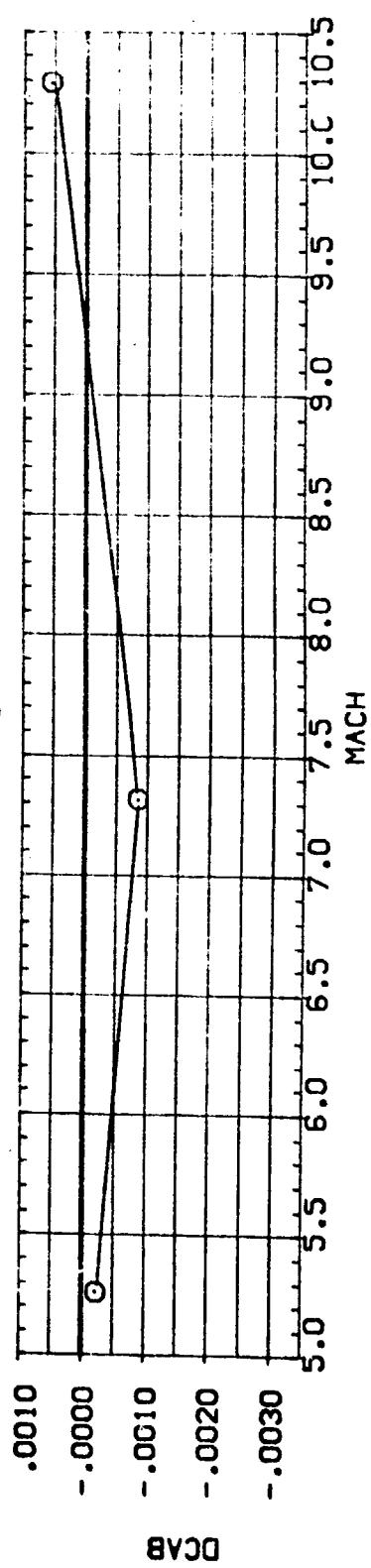
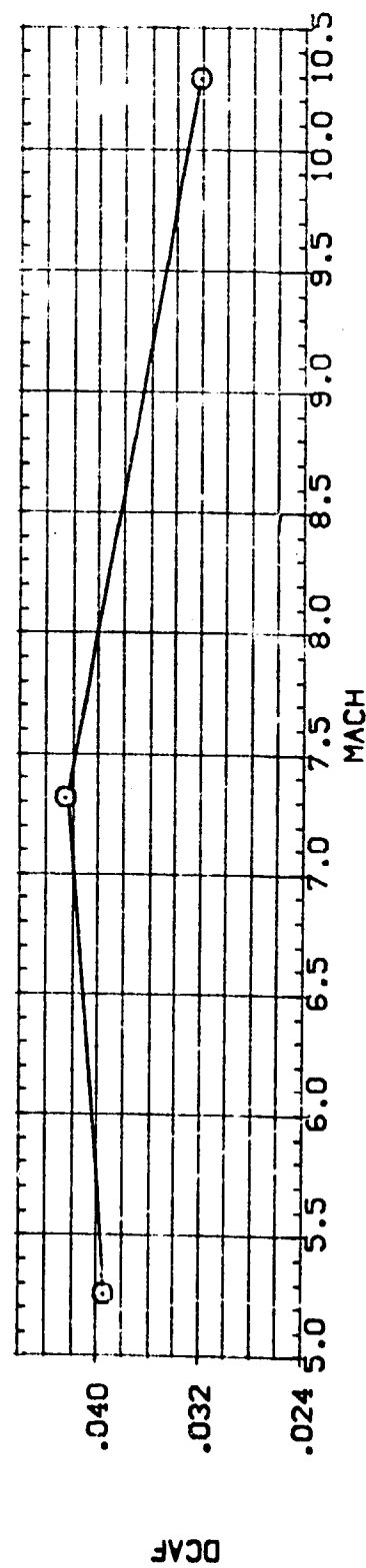
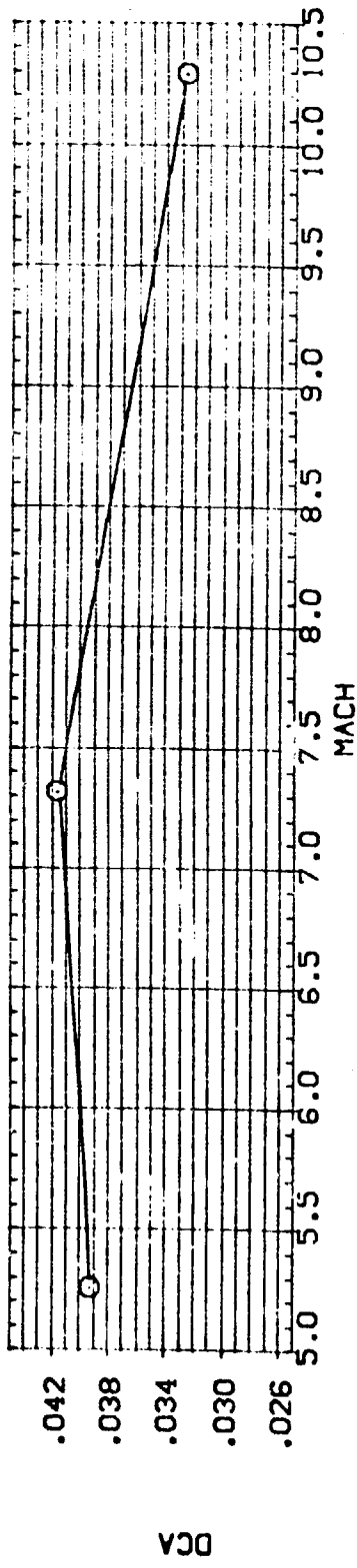


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER
 (B) ALPHA = 35.00

DATA SET SYMBOL: (080049) \bigcirc CONFIGURATION DESCRIPTION: ARES 3.5-160 DA118 (B10F4C507H348)(V07E18)(V5R5) DELEVN: 10.000 DELBOF: 28.000

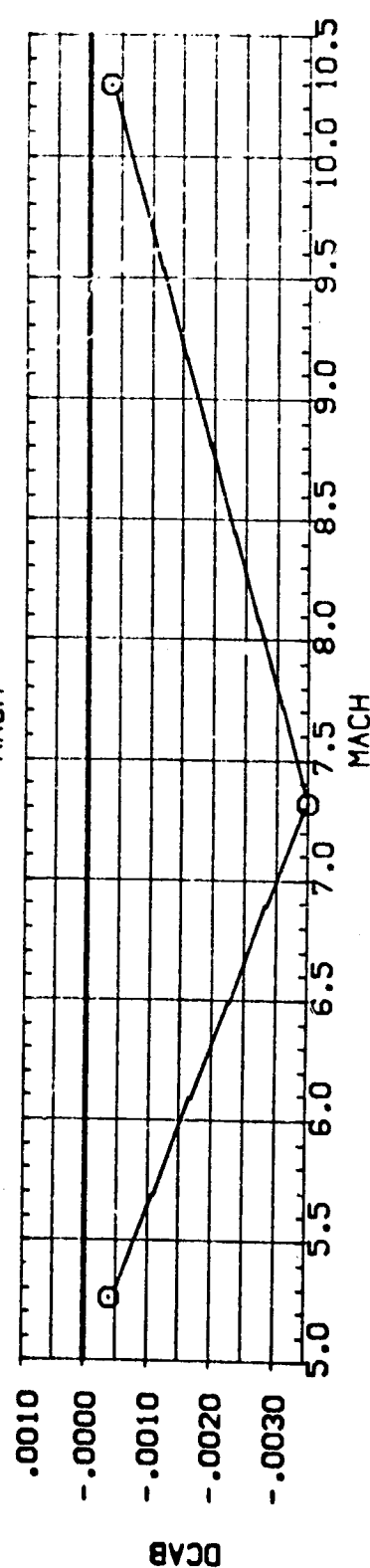
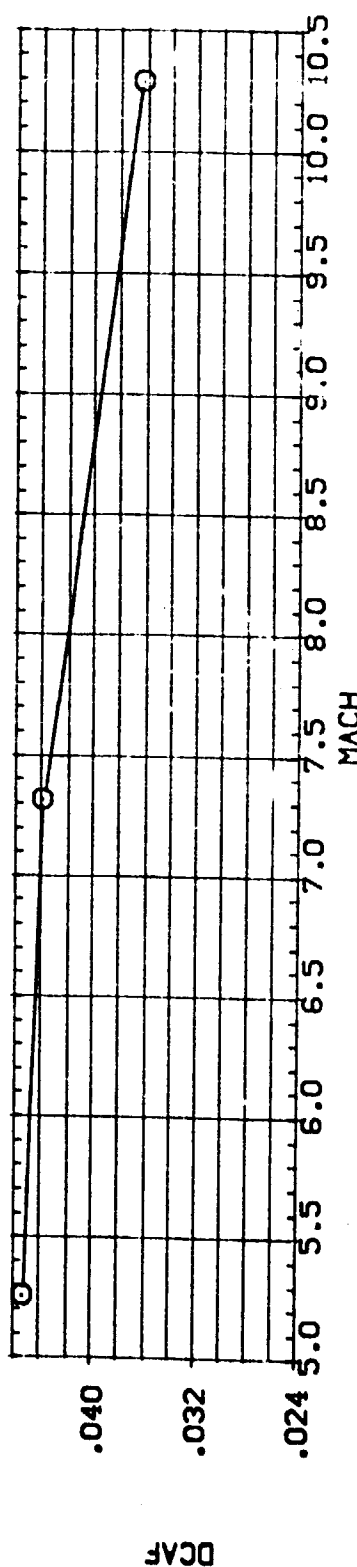
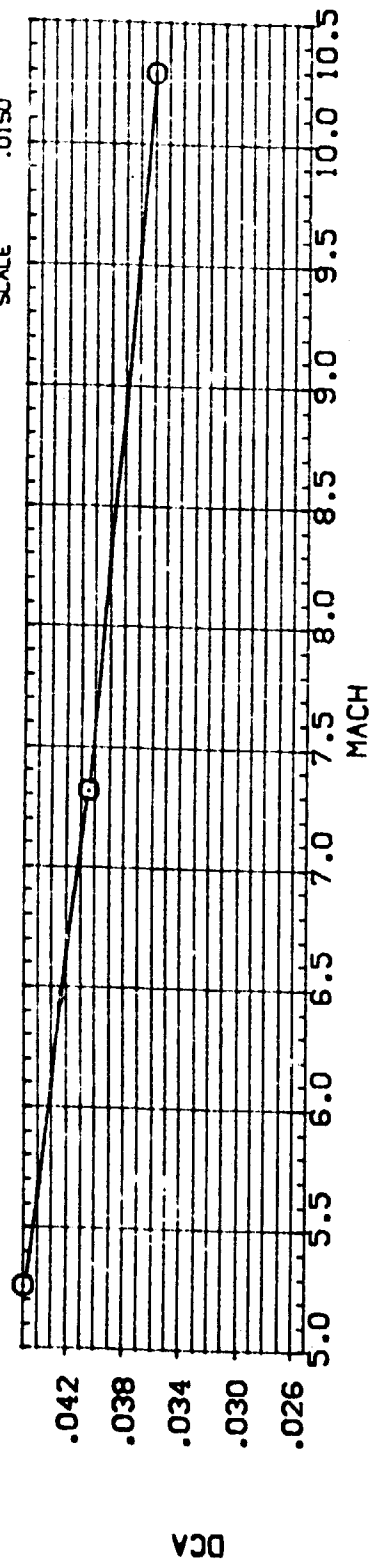


FIG. 2.E INCREMENTAL ELEVEN EFFECTS WITH MACH NUMBER

(CJALPHA = 39.00

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.6100 IN.
 BREF 936.6800 IN.
 XPRP 1075.4600 IN.
 YPRP 400.0000 IN.
 ZPRP 400.0000 IN.
 SCALE 0.150

DELEW DELBOF
 10.000 28.000

DATA SET SYMBOL (GB0049) ○
 CONFIGURATION DESCRIPTION
 ASES 3.5-160 DA118 (B10F4C507NG-8)(V87E18)(V5R5)

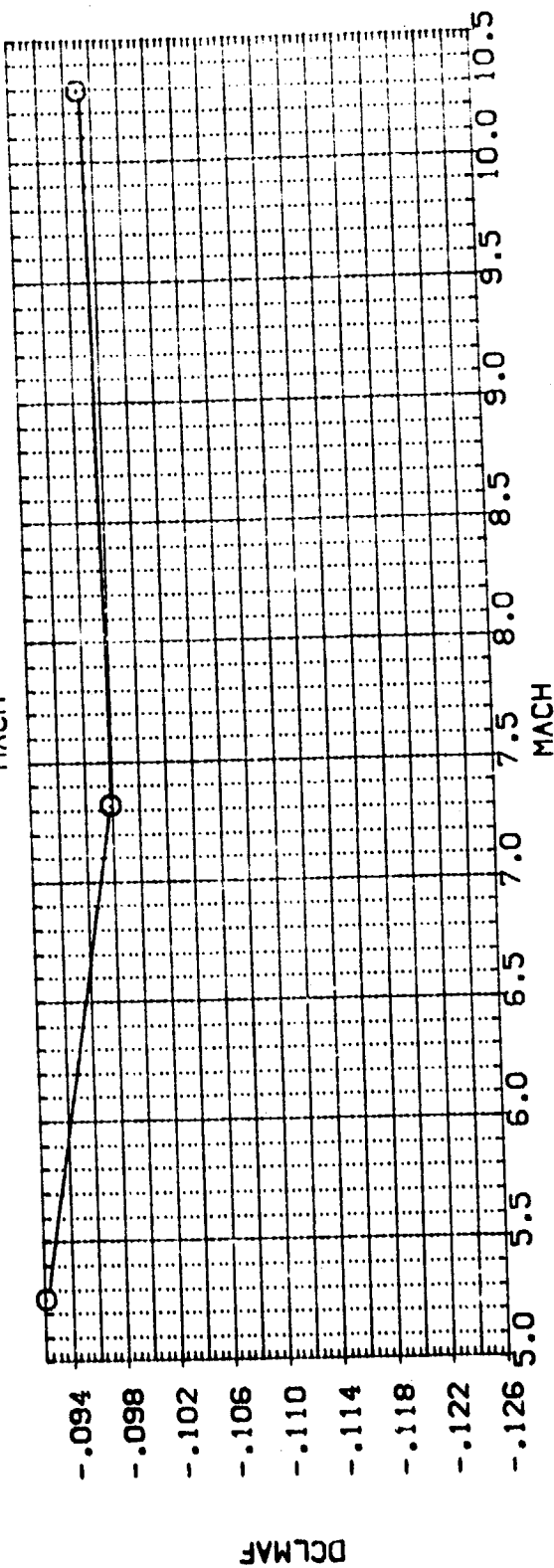
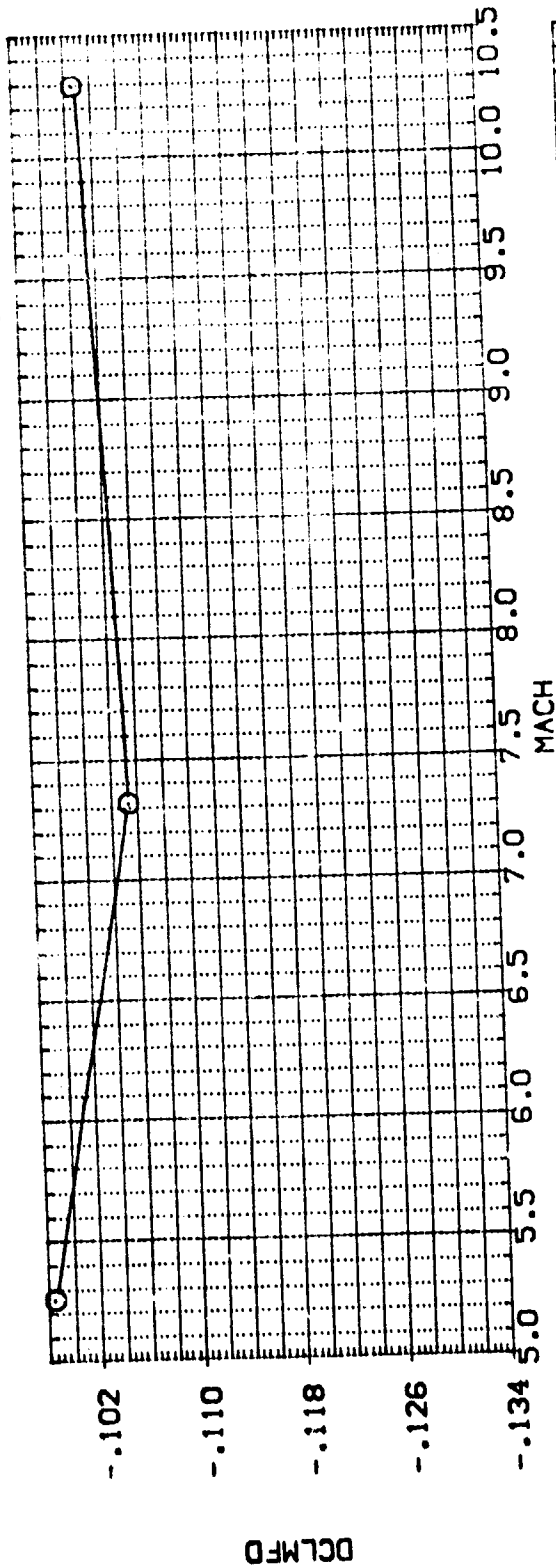


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(A) ALPHA = 30.00

REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

DELEVN DELBOF

DELEVN	10.000	28.000
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DATA SET SYMBOL ○ CONFIGURATION DESCRIPTION

(GBX049) ○ APES 3.5-160 GA11B (B10FAC507K3N8)(V87E18)(V5K5)

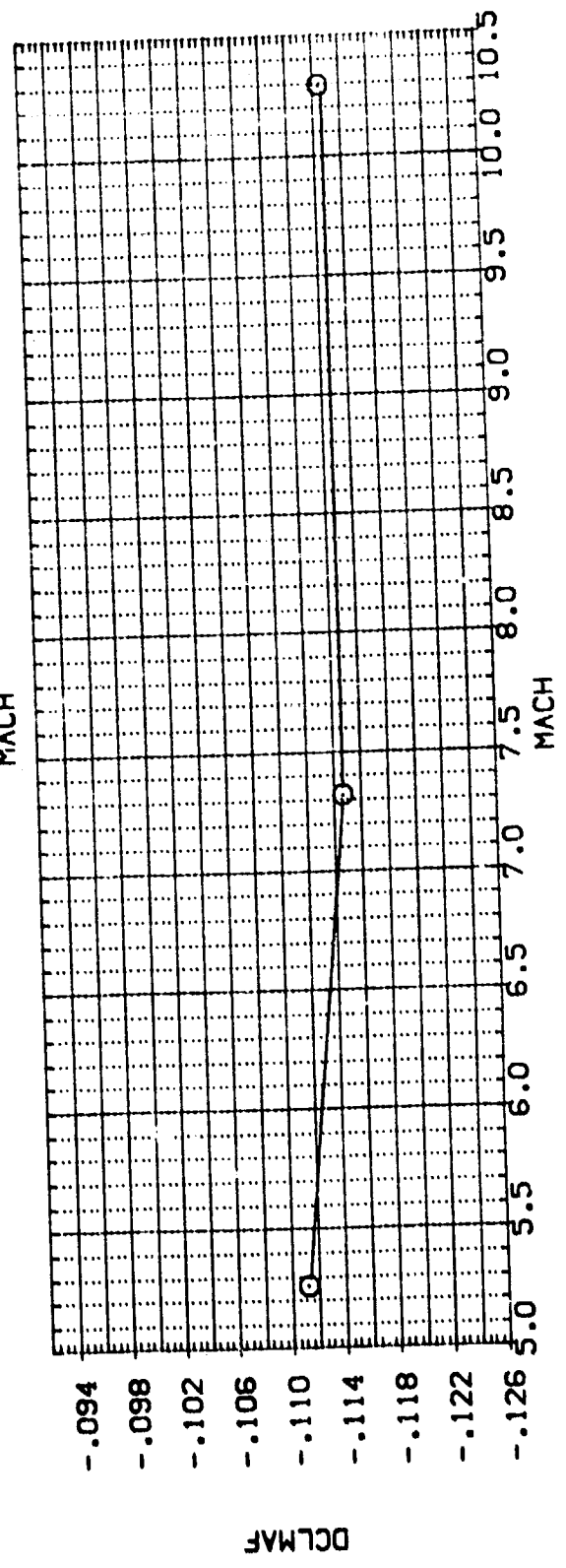
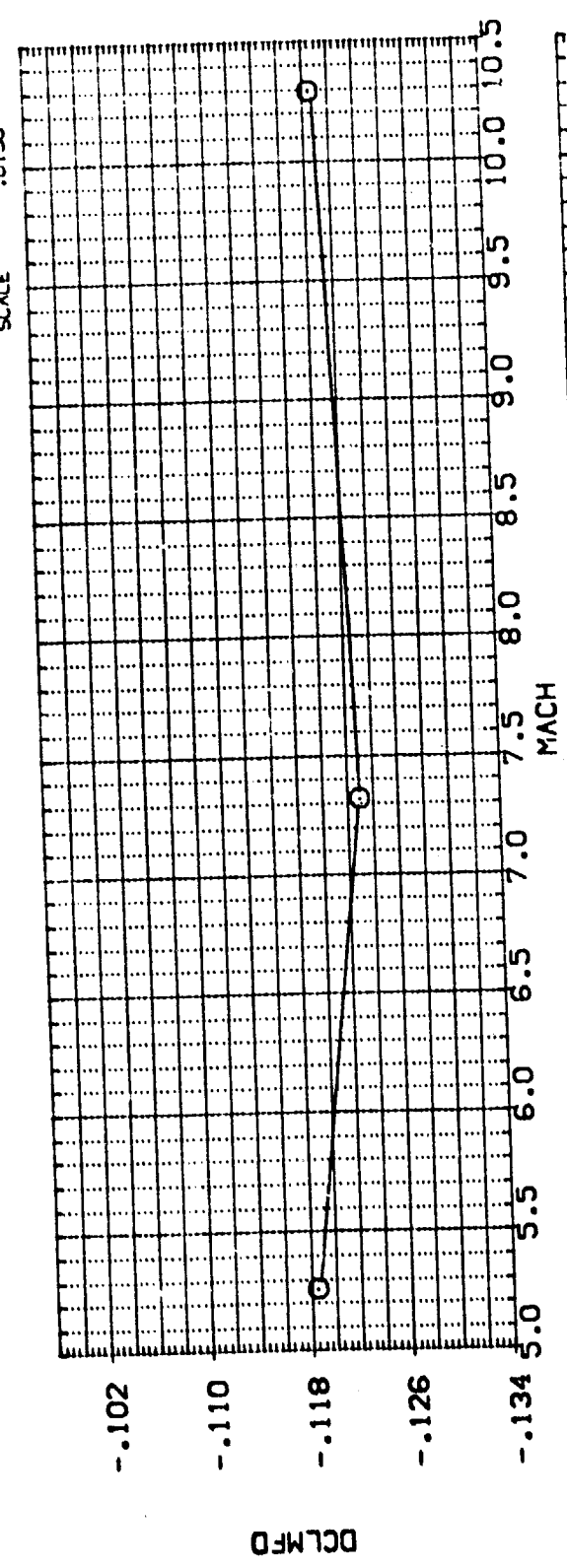


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(B) ALPHA = 35.00

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DELEVN DELBOF
 10.000 28.000

DATA SET SYMBOL (08X049) O
 CONFIGURATION DESCRIPTION
 ARES 3.5-160 0A118 (810F4C507K348)(V87E18)(V5R5)

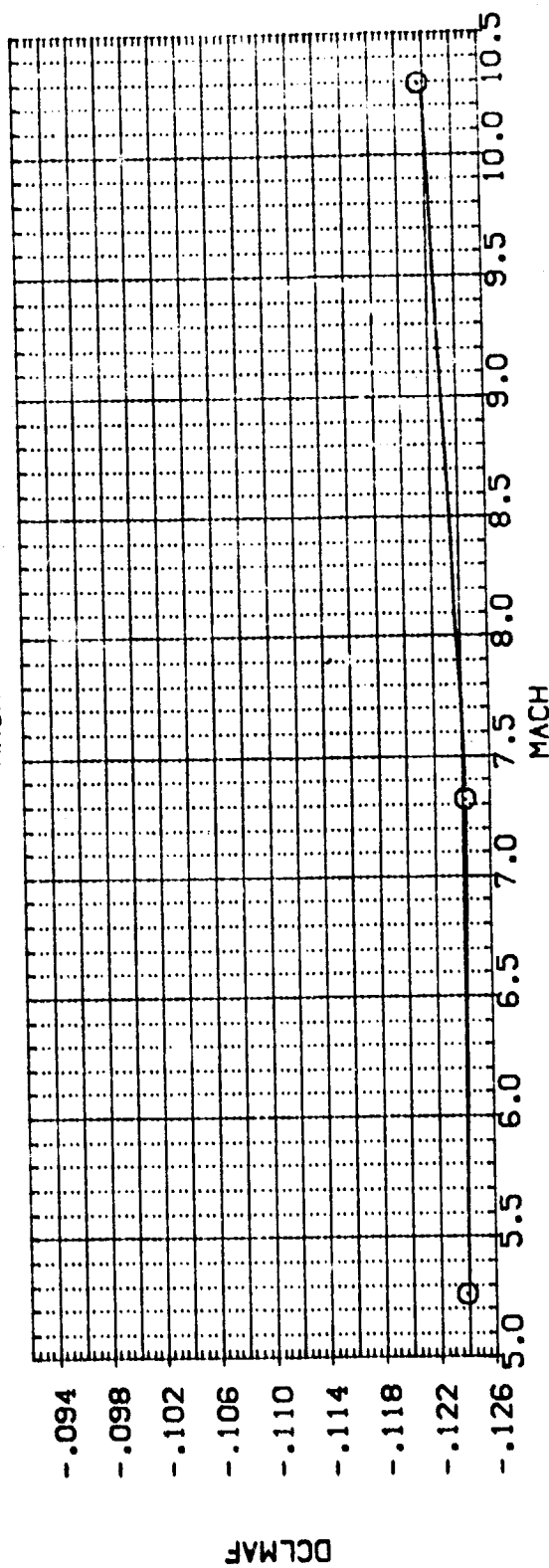
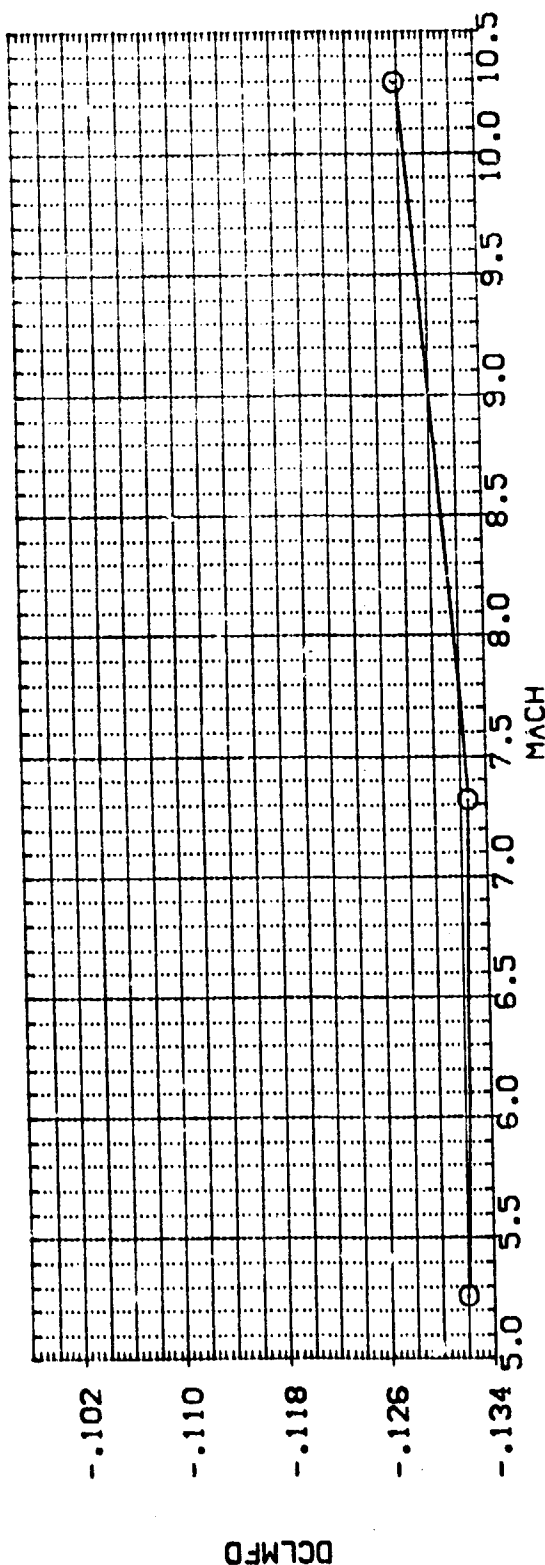


FIG. 2.E INCREMENTAL ELEVON EFFECTS WITH MACH NUMBER

(C) ALPHA = 39.00

DATA SET SYMBOL ○ CONFIGURATION DESCRIPTION
 (DB0046) ○ AVE 3.5-160 0A11B (B10F4C507G048)(V67E18)(V59S)

ELEVON RUDDER SPDBRK BDFLAP
 .000 .000 54.920 -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

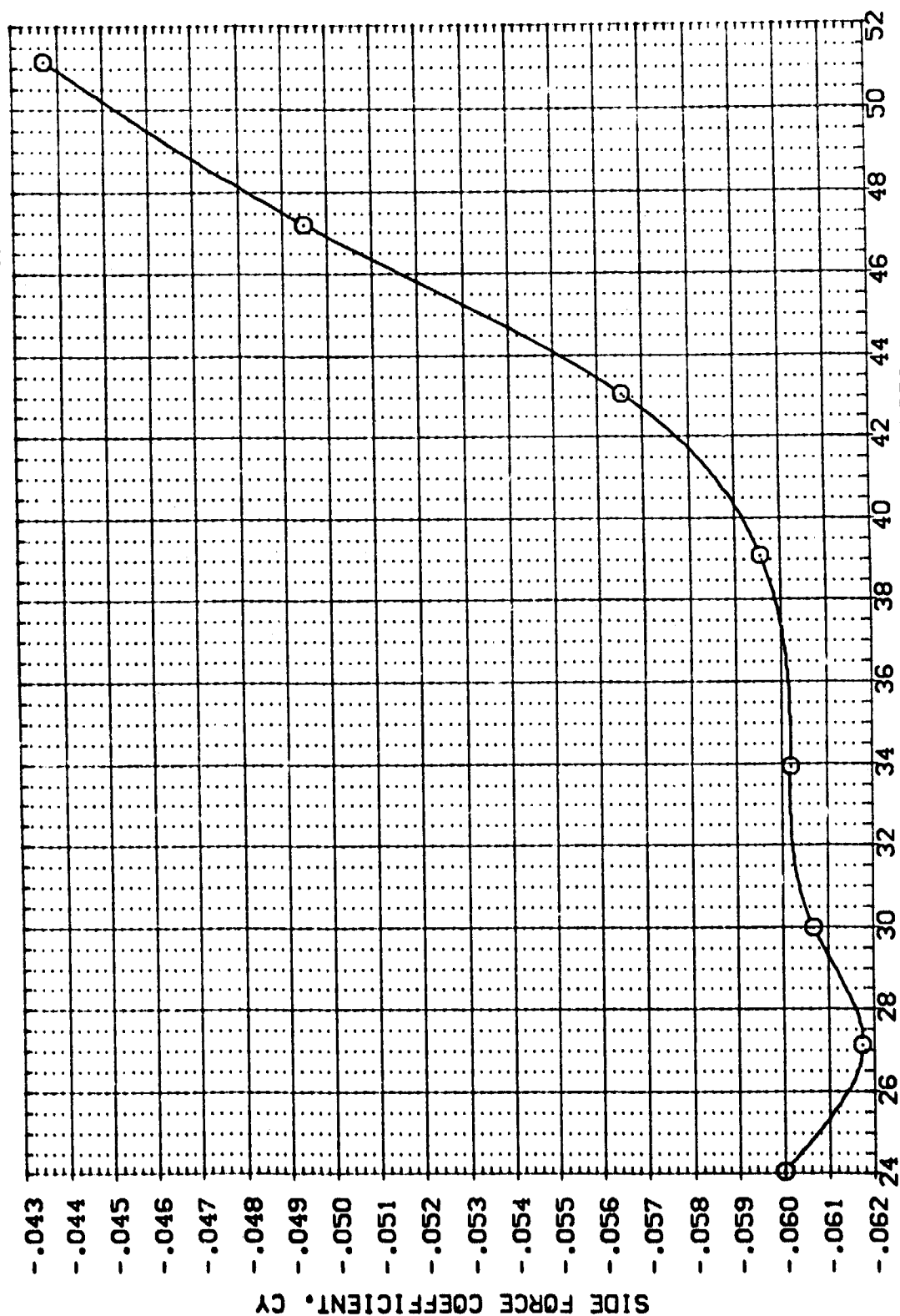


FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 5.26

DATA SET SYMBOL: \bigcirc CONFIGURATION DESCRIPTION: AVES 3.5-160 BA11B (B10F4C5D7KGN8)(V87E18)(1'SR5)

ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION	
.000	.000	54.920	-14.250	SREF	2690.0000 SQ.FT.
				LREF	474.8100 IN.
				BREF	936.6800 IN.
				XMRP	1076.4800 IN.
				YMRP	.0000 IN.
				ZMRP	400.0000 IN.
				SCALE	.0150

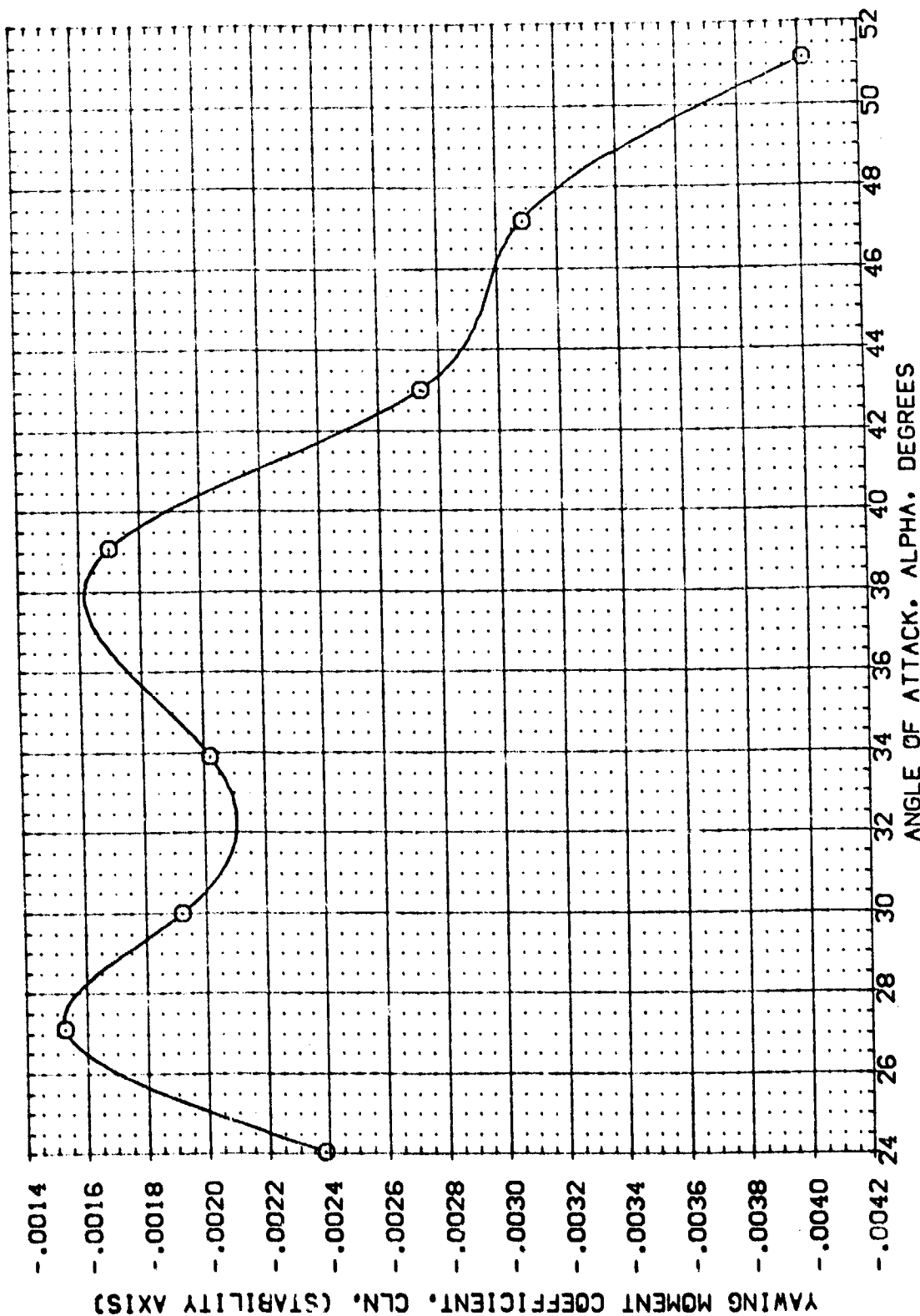


FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 5.26

DATA SET SYMBOL (080046) \bigcirc CONFIGURATION DESCRIPTION
 AYES 3.5-160 DA11B (B10F4C507K3N8)(V87E18)(V5R5)

ELEVON .000 RUDDER .000 SPOILER 54.920 BOFLAP -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

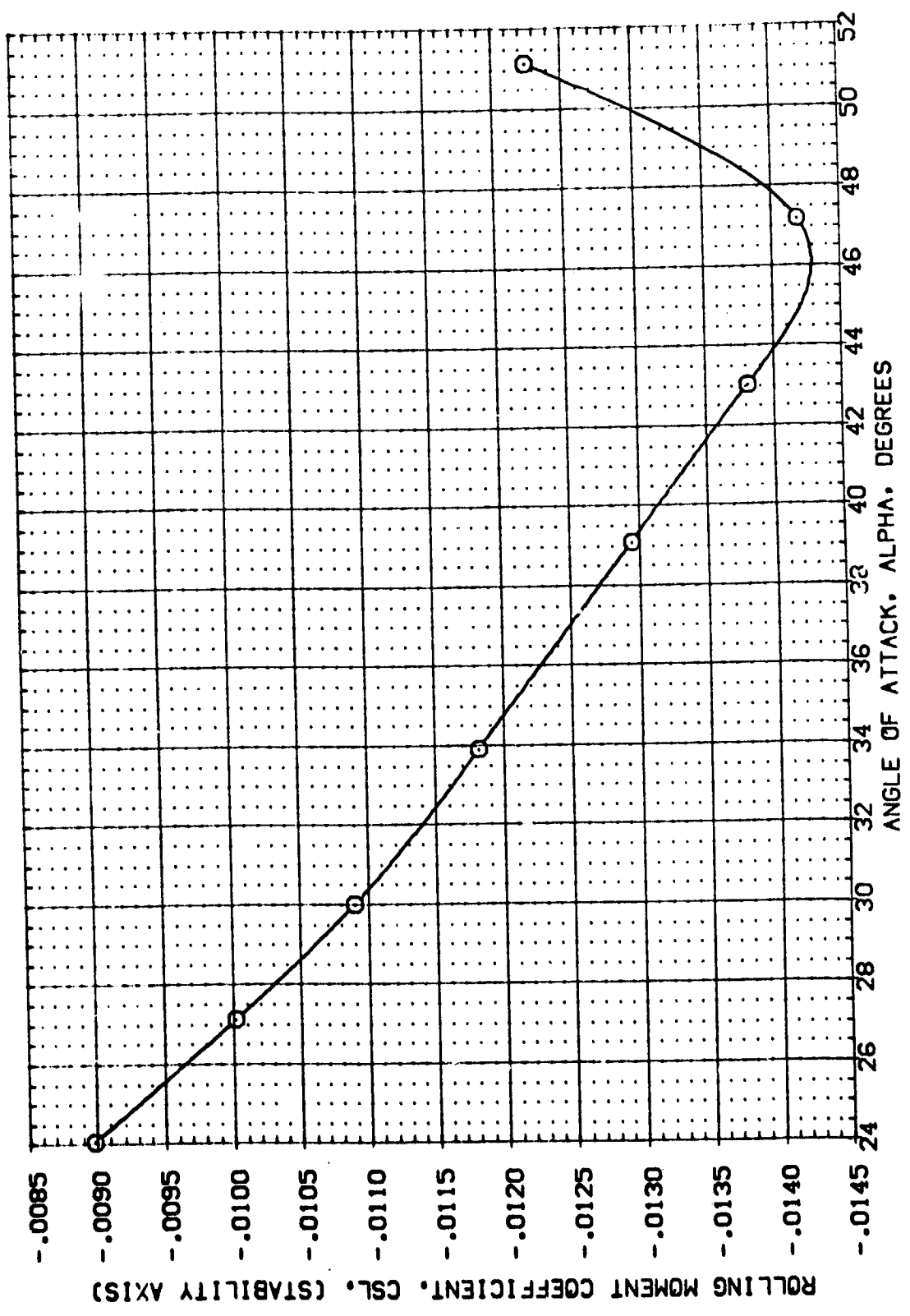


FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(α)MACH = 5.26

DATA SET SYMBOL: (DBK005) ○ ARES 3.5-160 CA11B (B10F4C5D7H3N8)(V87E18)(V5R5)

CONFIGURATION DESCRIPTION: ELEVON RUDDER SPOILER BOFLAP

REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8100 IN. BREF 936.6800 IN. XREF 1076.4800 IN. YREF .0000 IN. ZREF 400.0000 IN. SCALE 0.150

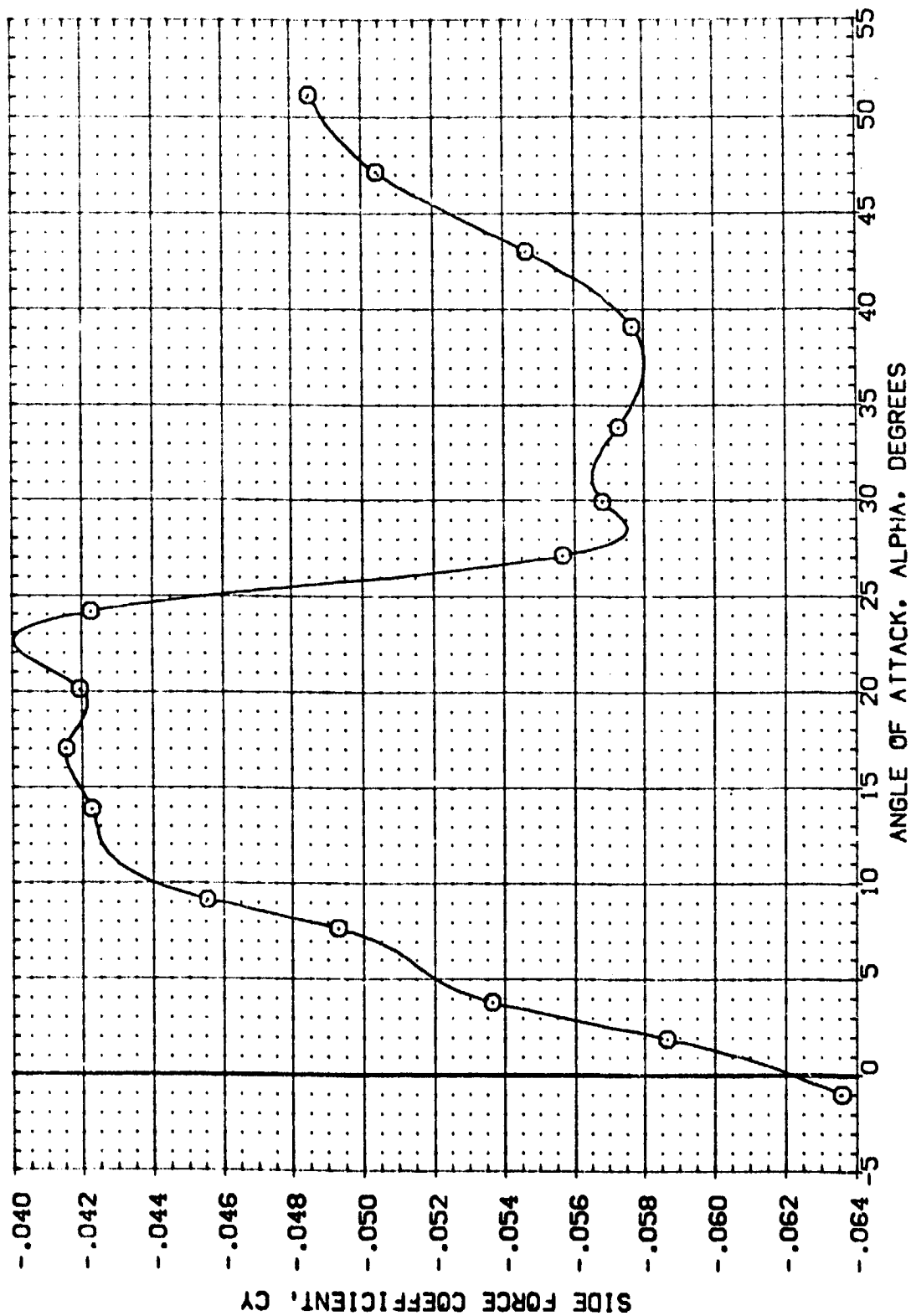
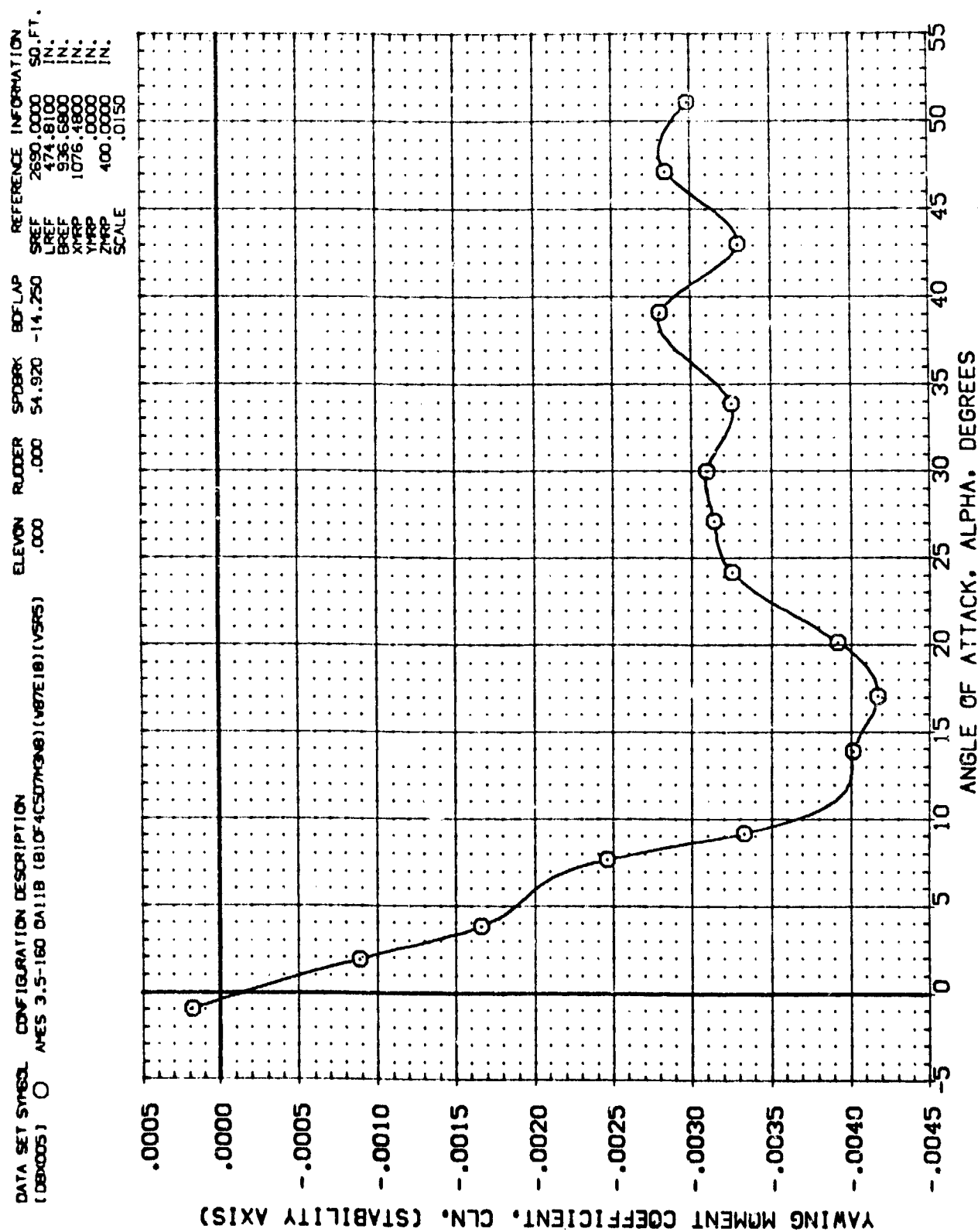


FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 7.32

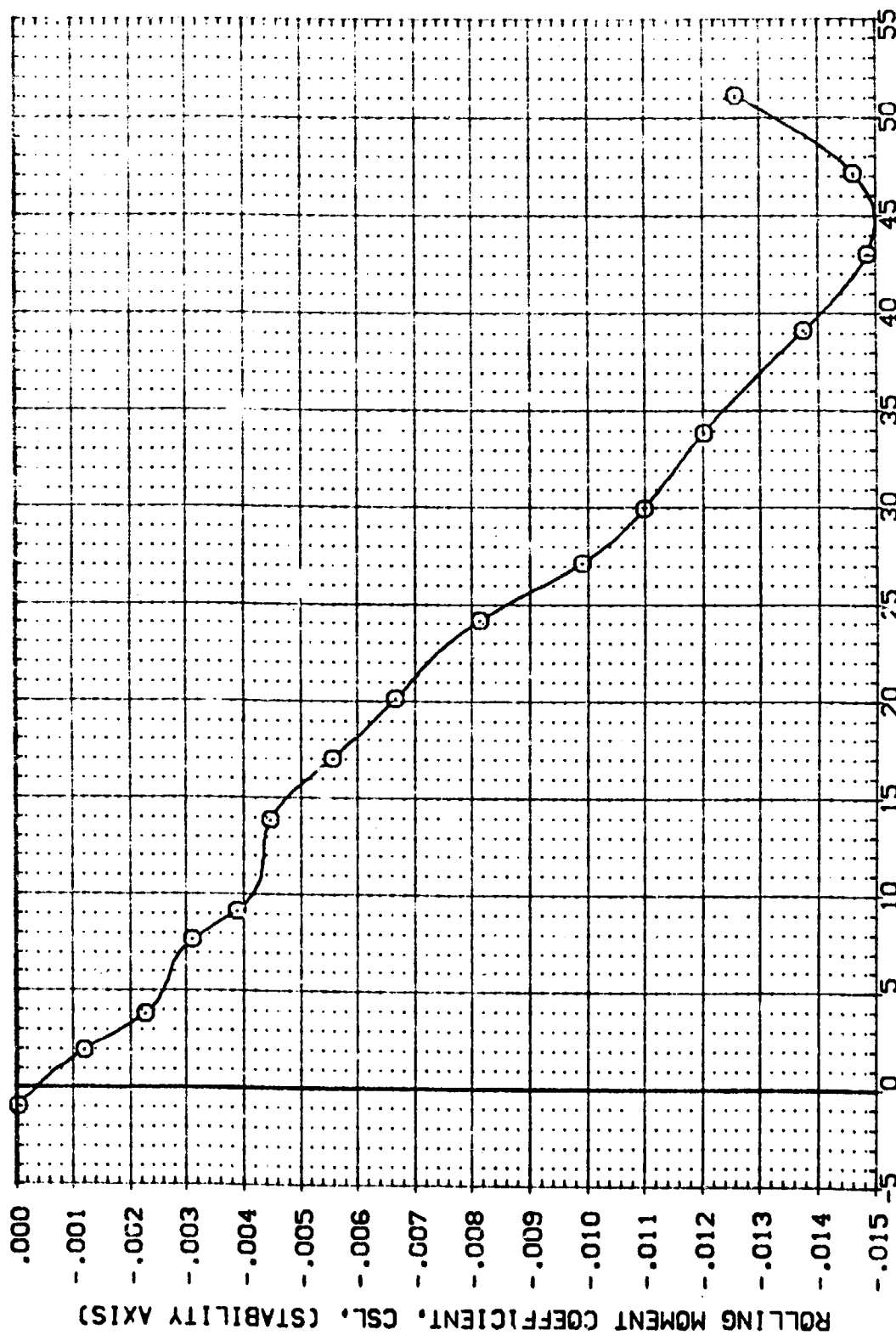

$$\text{LADMACH} = 7.32$$

PAGE 201

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (DB005) O AYES 3.5-160 0A118 (B10F4C507G3G8)(V87E18)(V5R5)

ELEVON RUDDER SPDRK BOFLAP
 .000 .000 54.920 -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 PAREF 115.6600 IN.
 XPRP 1076.4800 IN.
 YPRP 10000 IN.
 ZPRP 400.0000 IN.
 SCALE 10100



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 7.32

DATA SET SYMBOL: DBX044

CONFIGURATION DESCRIPTION: AVES 3.5-160 CA11B (B10F4C507H348)(V87E18)(V59S)

ELEVON: .000

RUDDER: .000

SPOILER: 54.920

BOFLAP: -14.250

REFERENCE INFORMATION:

SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XTRP	1076.1800	IN.
YTRP	400.0000	IN.
ZTRP	400.0000	IN.
SCALE	.0150	

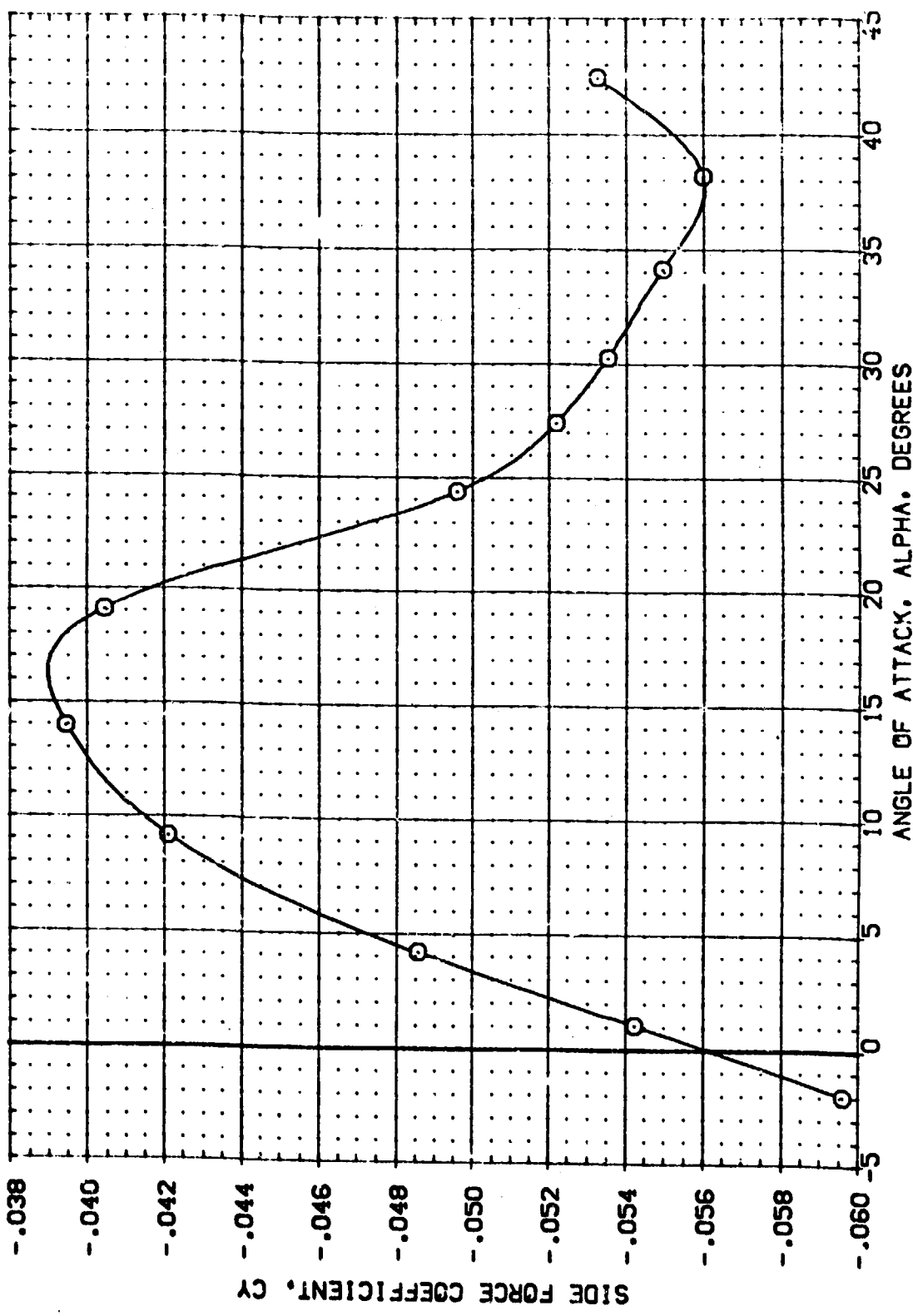


FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 10.29

DATA SET SYMBOL: (DB0044) ○ CONFIGURATION DESCRIPTION: AYES 3.5-160 DALLB (C10F4C507K908)(V87E18)(V50R5)
 REFERENCE INFORMATION: SREF 2130.0000 50.FT., LREF 474.8100 IN., BREF 936.6900 IN., XREF 1576.4800 IN., YREF .0000 IN., ZREF 410.0000 IN., SCALE 0.150

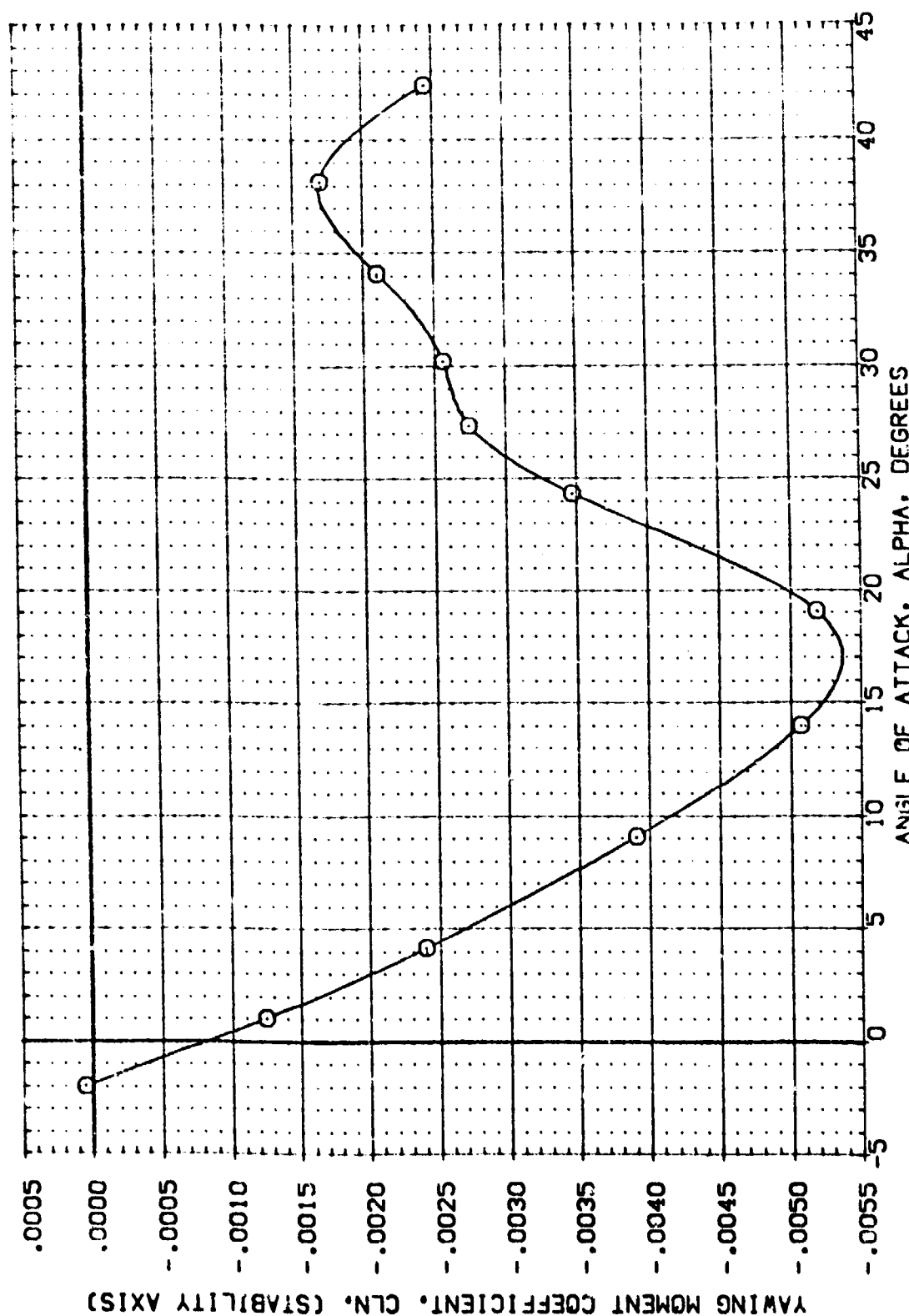
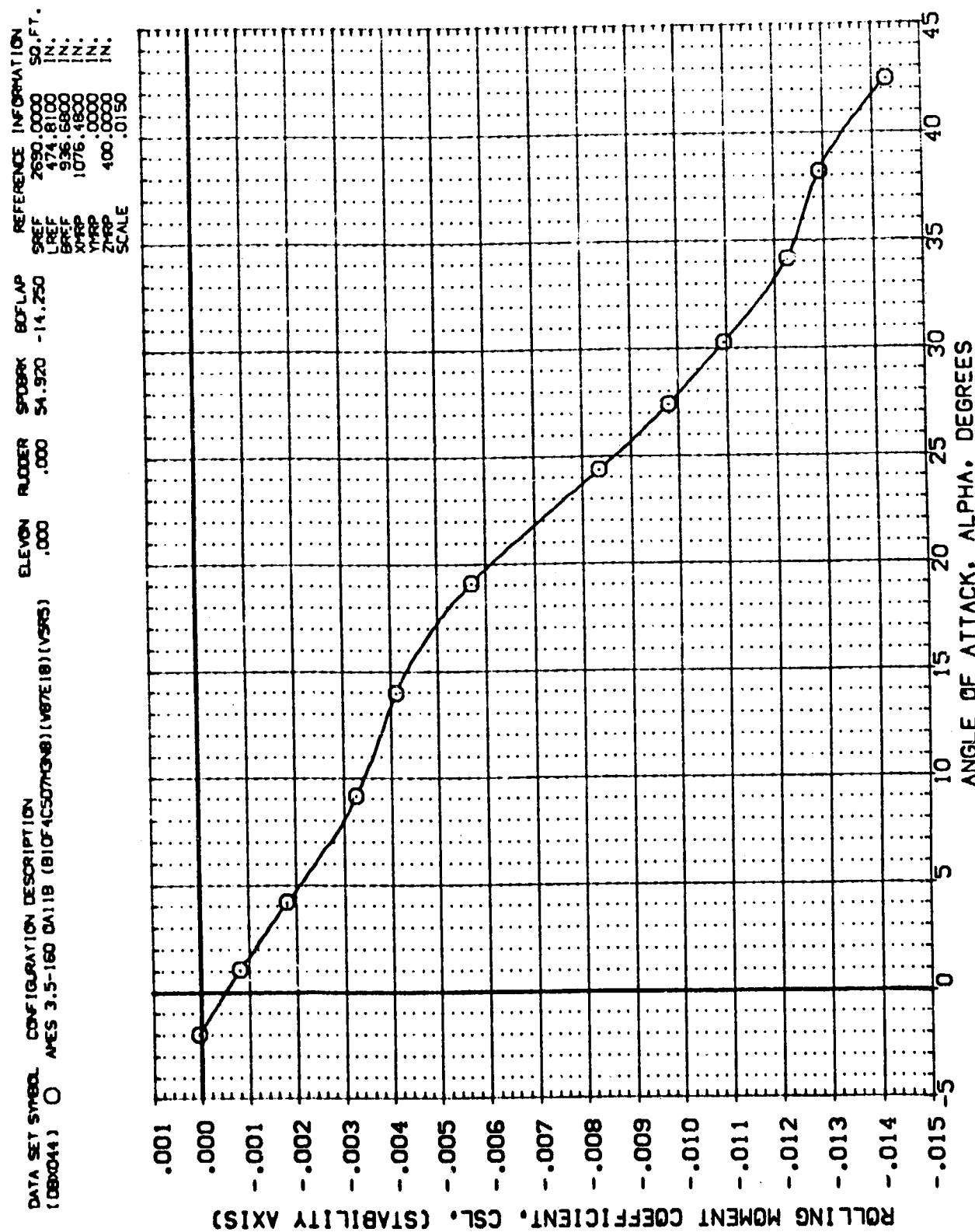


FIG. 3.A EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVATION	RUDDER	SPDRBK	BOFLAP	REFERENCE INFORMATION
(G9X046) ○	APES 3.5-160 DA11B (D10F4C5073-48)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 LREF 474.8100 SREF 936.6800 XTRP 1076.1800 YTRP .0000 ZTRP .0000 SCALE 400.0000 SCALE .0150

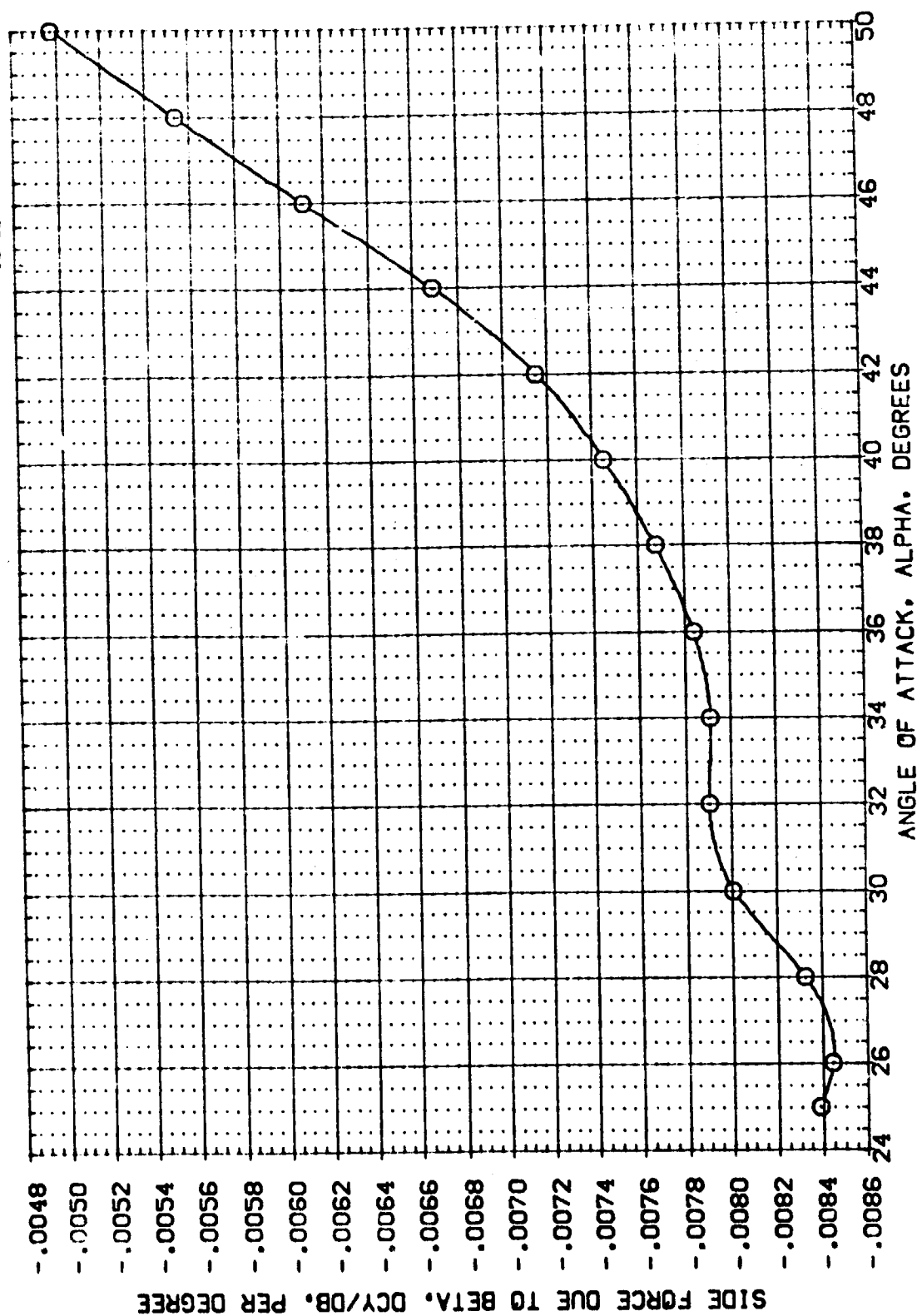


FIG. 3.B DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

$$\{A\}MACH = 5.26$$

DATA SET SYMBOL (G30046) ○
 CONFIGURATION DESCRIPTION
 AVES 3.5-180 0A11B (810F4C507M3-01)(V87E18)(V5R5)

ELEVON .000
 RUDDER .000
 SPOBRK 54.920
 BDFLAP -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

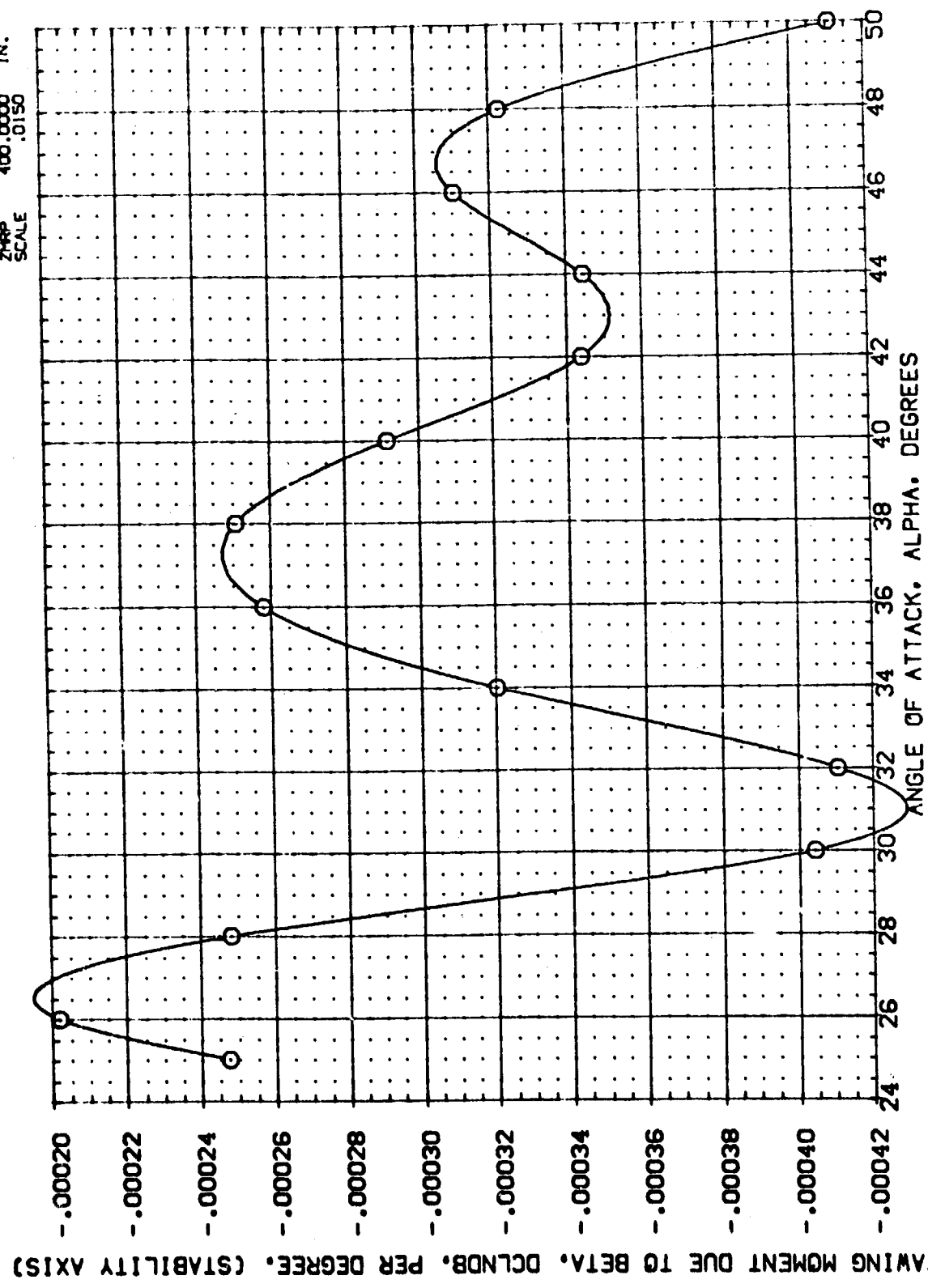


FIG. 3.B DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 5.26

DATA SET SYMBOL (080046) ○ CONFIGURATION DESCRIPTION ANES 3.5-160 0A118 (B10F4C507H308)(V87E18)(V5RS)

ELEVON RUDDER SPOILER BDFLAP
.000 .000 54.920 -14.250

REFERENCE INFORMATION
SPREF 2590.0000 SO.FT.
LREF 474.8100 IN.
BREF 936.9800 IN.
XREF 1076.4800 IN.
YREF .0000 IN.
ZREF 400.0000 IN.
SCALE .0153

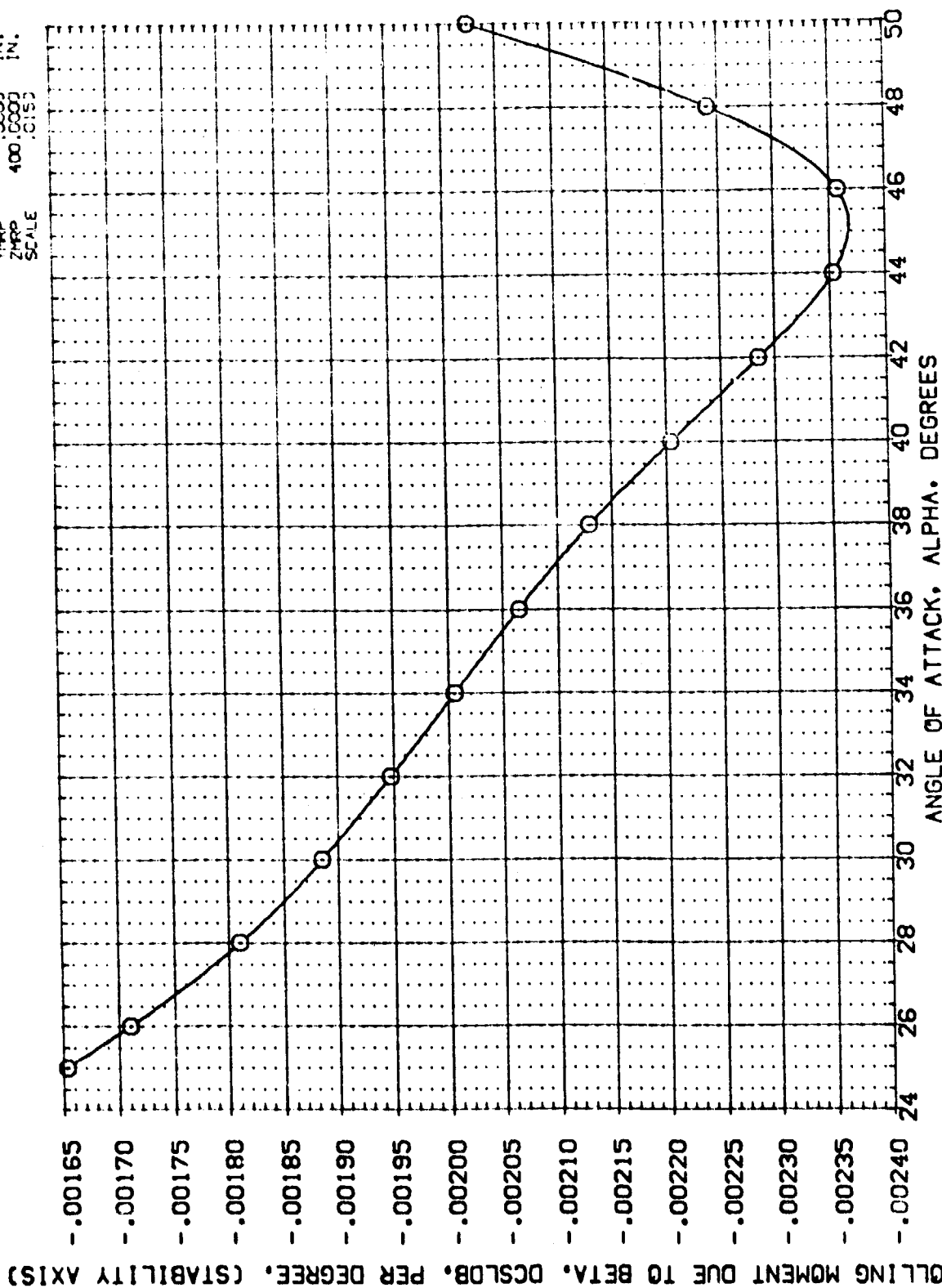


FIG. 3.B DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(GB005)	AVES 3.5-160 GA118 (B10F4C507M3B8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
						LREF 474.8100 IN.
						BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

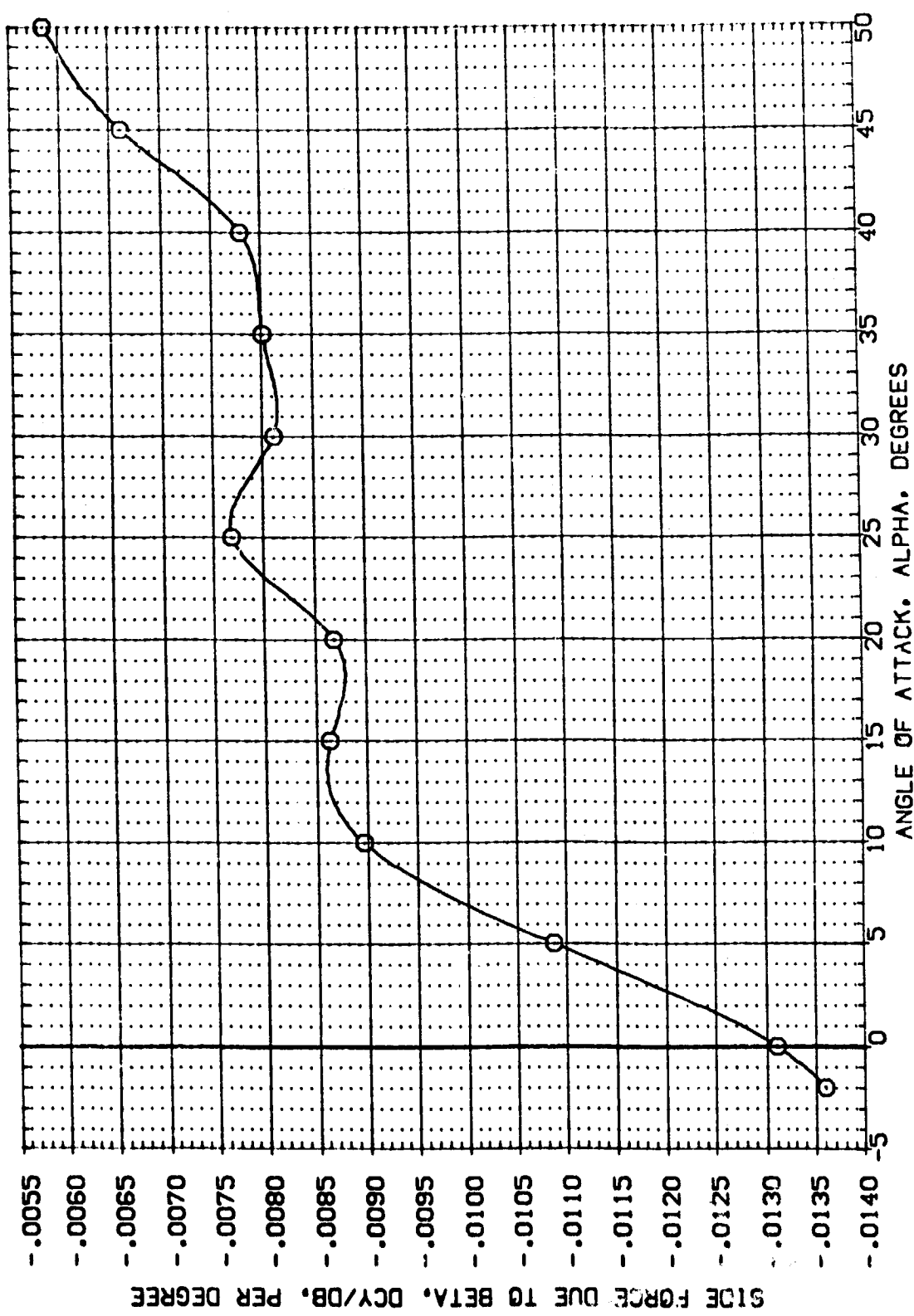


FIG. 3.B DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 7.32

DATA SET SYMBOL: 08X005
 CONFIGURATION DESCRIPTION: ARES 3.5-160 OA11B (810F4C507M38)(V87E18)(VSR5)
 REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 YMRP: 1076.4800 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

ELEVON: .000
 RUDDER: .000
 SPOILER: 54.920
 BOCLAP: -14.250

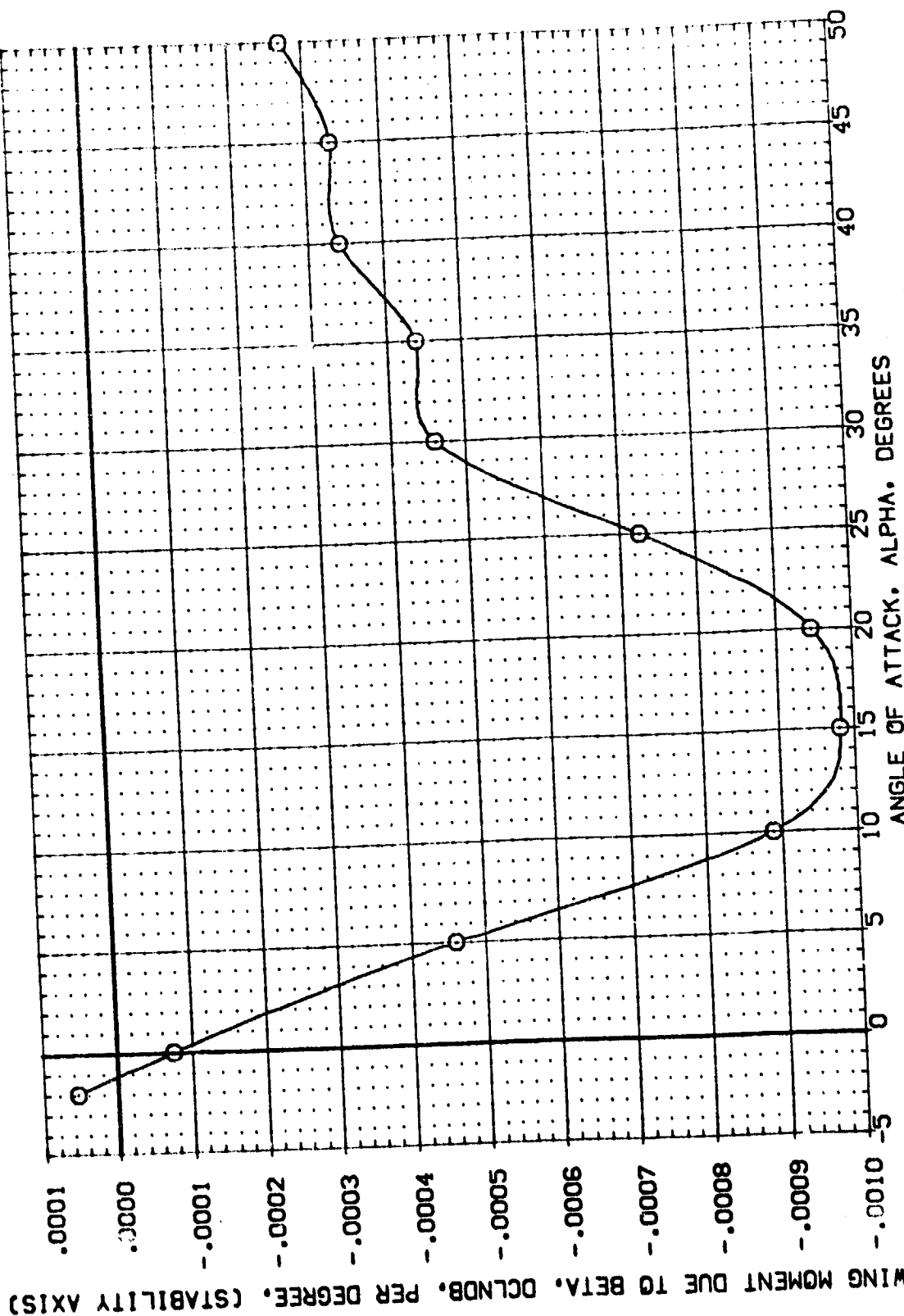


FIG. 3.B DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 7.32

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 YPRP 1076.4800 IN.
 ZPRP 400.0000 IN.
 SCALE .0150

ELEVON RUDDER SPOILER BOFLAP
 .000 .000 54.920 -14.250

DATA SET: VHSOL CONFIGURATION DESCRIPTION
 (GBX005) O AYES 3.5-160 DA118 (810F4C507M3-8)(V87E18)(V595)

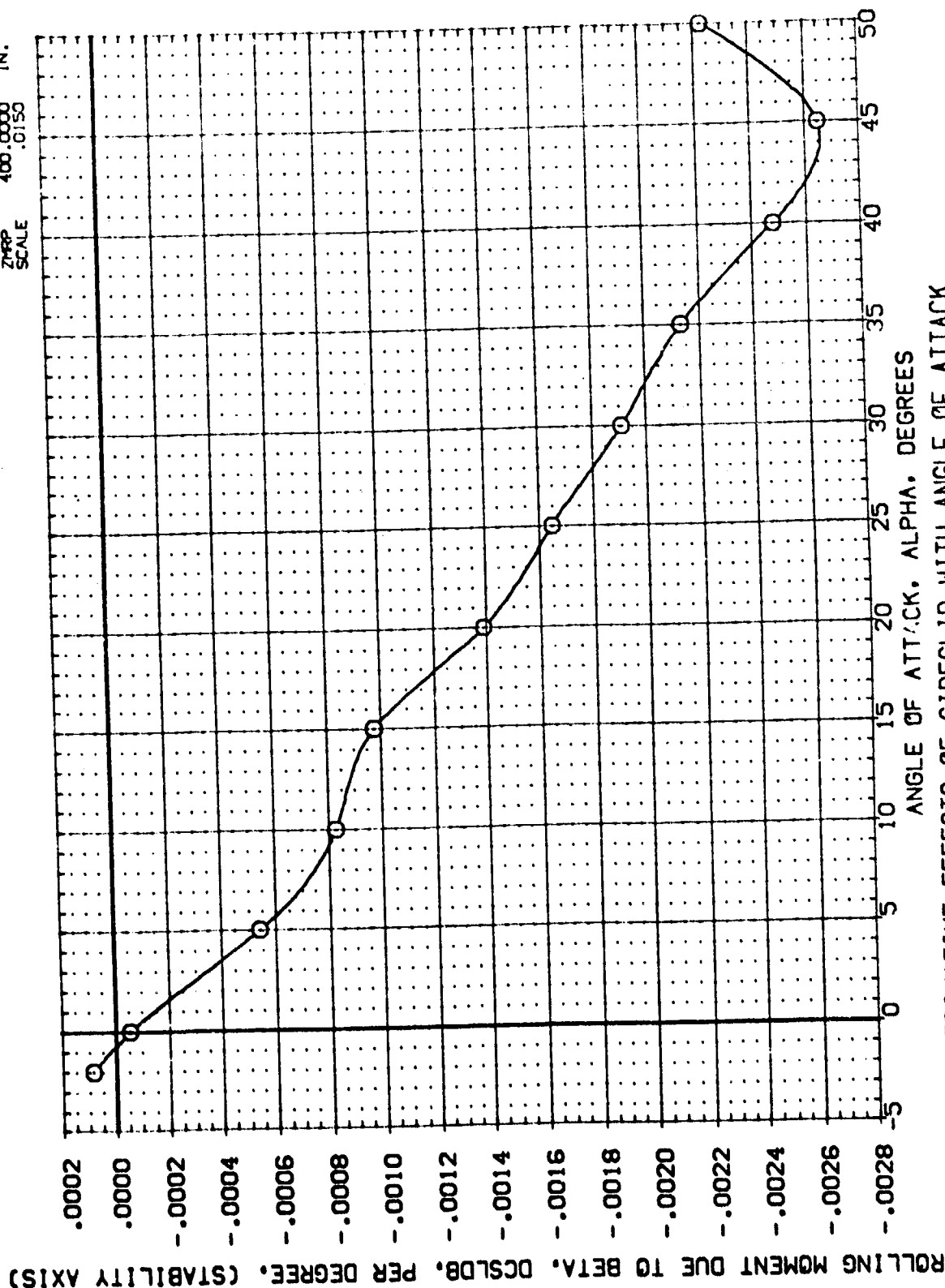


FIG. 3.8 DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 7.32

DATA SET SYMBOL (GB0044) ○ CONFIGURATION DESCRIPTION ARES 3.5-160 CALIB (B10F4C507K348)(V87E18)(V5R5)

ELEVON .000 RUDDER .000 SPOROK 54.920 BOFLAP -14.250

REFERENCE INFORMATION

SREF	2650.0000	S2.FT.
LREF	474.8100	IN.
BREF	936.6500	IN.
XREF	1076.4800	IN.
YREF	.0000	IN.
ZREF	400.0000	IN.
SCALE	.0150	

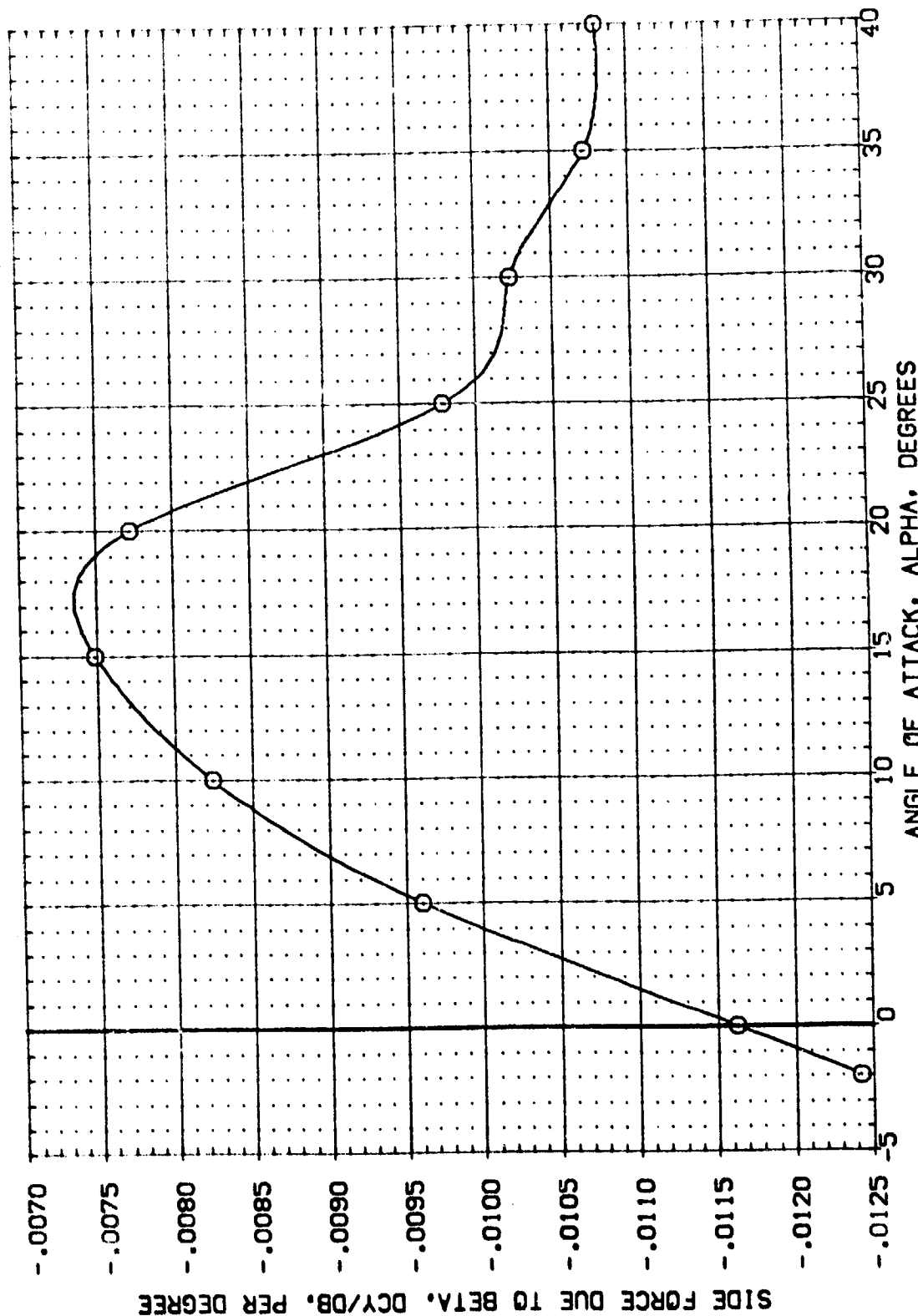


FIG. 3.8 DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 10.29



DATA SET SYMBOL CONFIGURATION DESCRIPTION
(C20044) O ARES 3.5-160 0A11B (B10F4C507M3-6)(V67E18)(V595)

ELEVON .000 RUDDER .000 SPDBRK 54.920 BDFLAP -14.250

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XPRP 1076.4800 IN.
YPRP 400.0000 IN.
ZPRP 400.0000 IN.
SCALE .0150

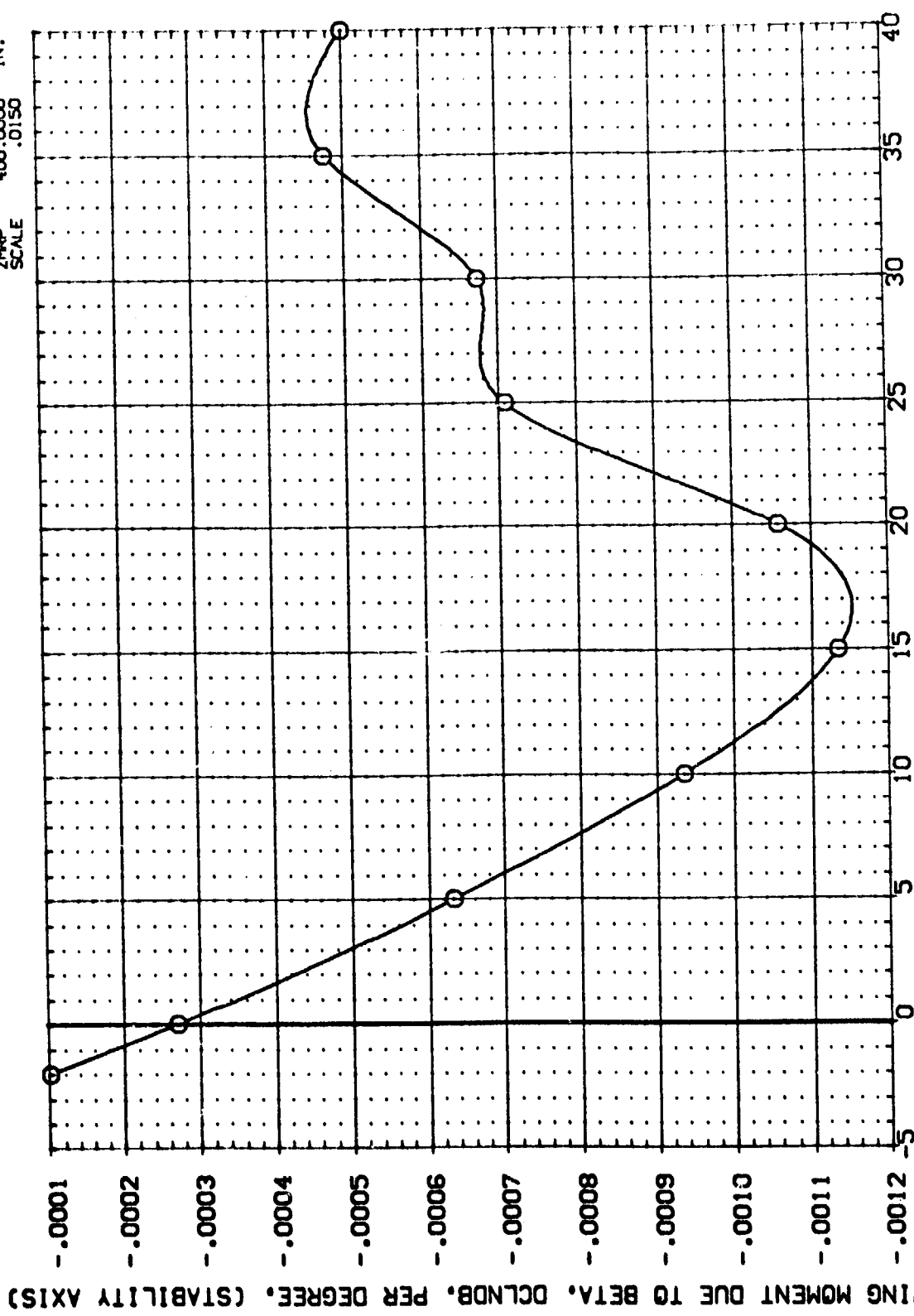


FIG. 3.B DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 10.29

DATA SET SYMBOL (G30041) \bigcirc CONFIGURATION DESCRIPTION ARES 3.5-160 DALLB (B10F4C507H348) (V87E18) (V595)

ELEVON .000 RUDDER .000 SPOBRK 54.520 BOFLAP -14.250

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8150 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 0.0000 IN.
 SCALE .0150

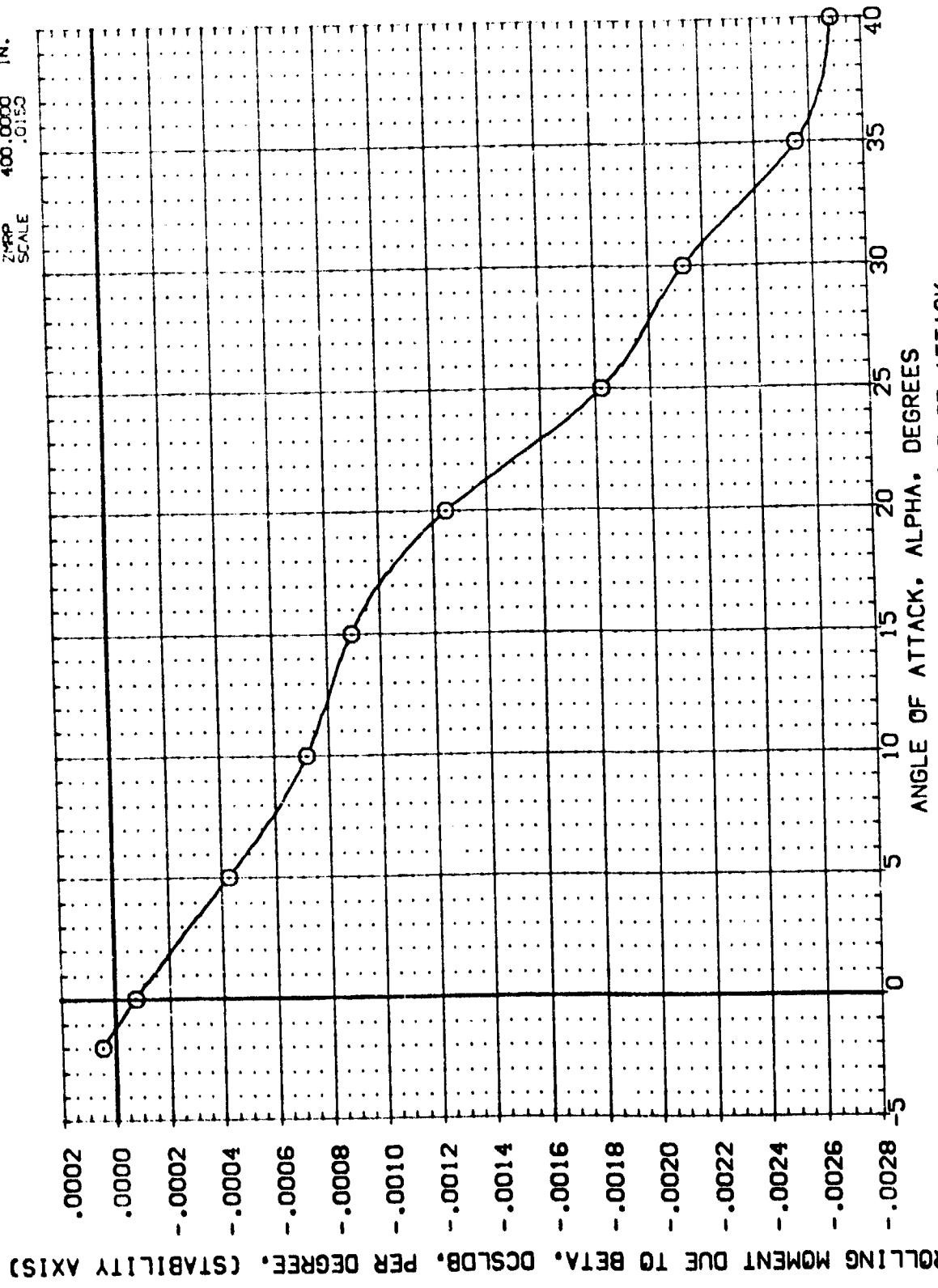


FIG. 3.8 DERIVATIVE EFFECTS OF SIDESLIP WITH ANGLE OF ATTACK

(A)MACH = 10.29

DATA SET SYMBOL: (180046) O CONFIGURATION DESCRIPTION: ARES 3.5-50 0A11B (810F4C507K908:1V87E18)(VSR5)

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 BOFLAP: 14.250

REFERENCE INFORMATION:

	2690.0000	50.FT.
SREF	474.8100	IN.
LREF	936.6800	IN.
BREF	1076.4800	IN.
XMRP	.0000	IN.
YMRP	400.0000	IN.
ZMRP	.0150	IN.
SCALE		

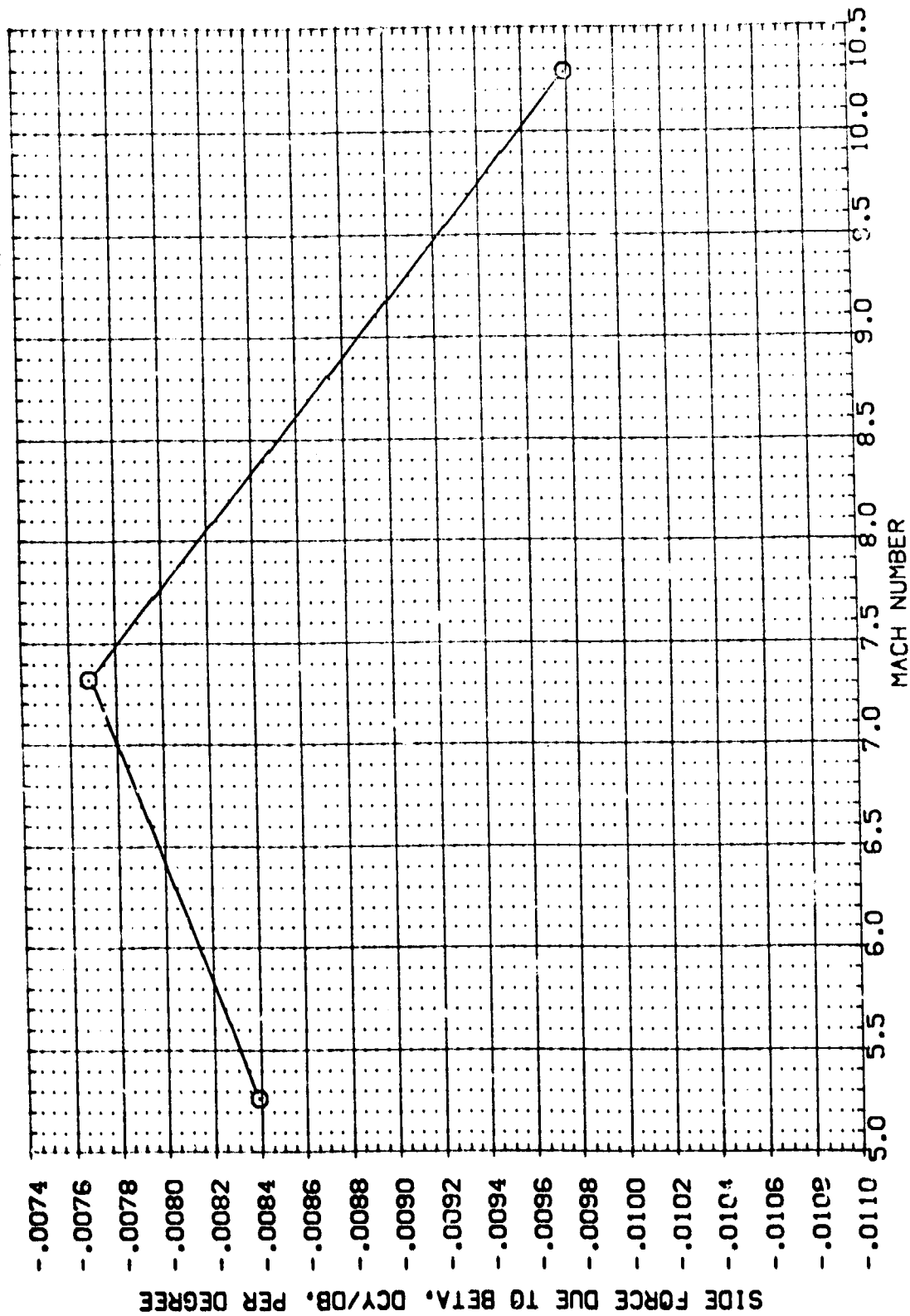


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER
(A) ALPHA = 25.00

DATA SET SYMBOL (18X046) ○ CONFIGURATION DESCRIPTION AVES 3.5-1C3 0A118 (B10F4C507M3-6)(V87E18)(V5RS)

ELEVON RUDDER SPOILER BOFLAP

0.000 0.000 54.920 -14.250

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 414.8100 IN.

BREF 936.6800 IN.

XMRP 1076.4800 IN.

YMRP 0.0000 IN.

ZMRP 400.0000 IN.

SCALE 0.150

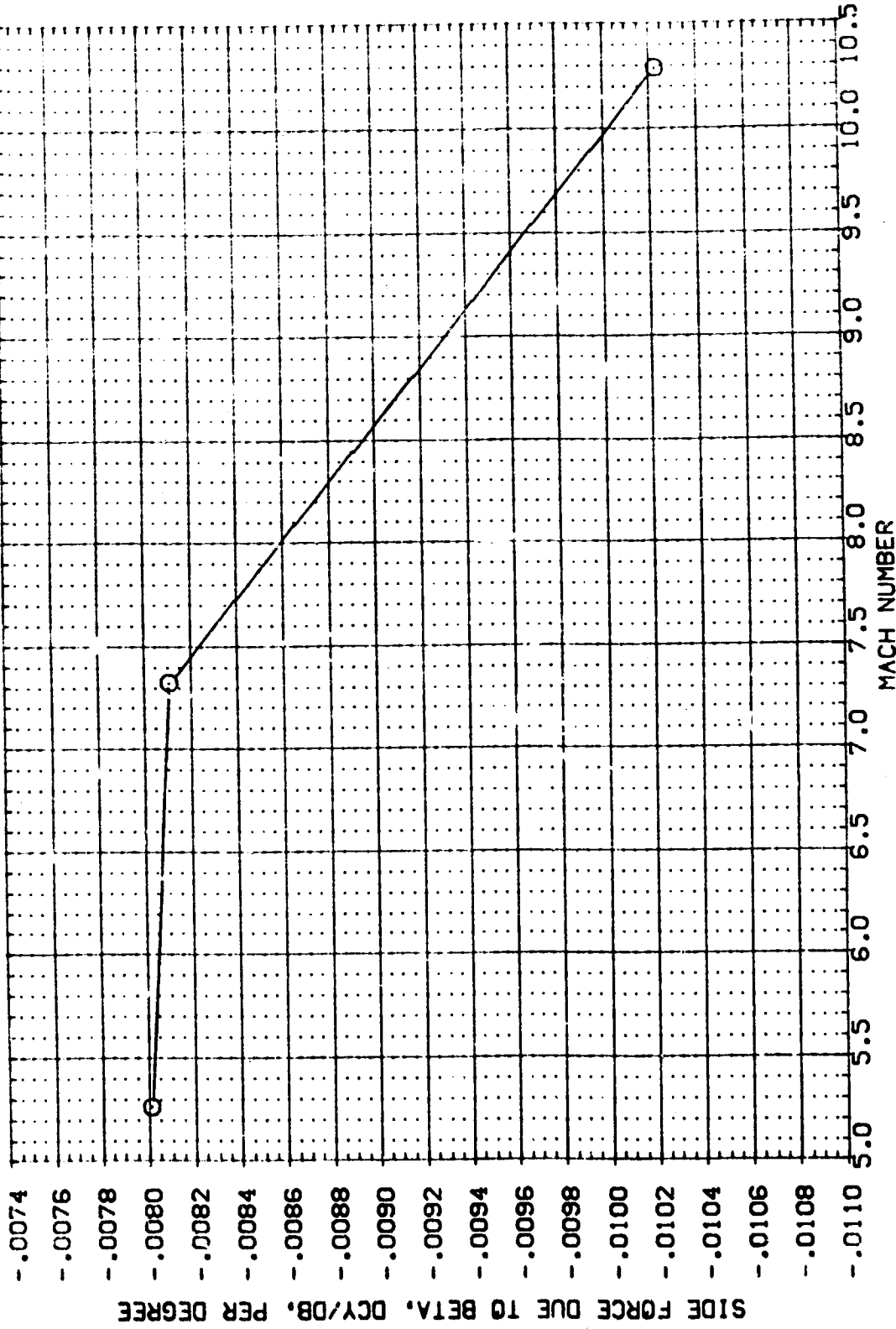


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(B)ALPHA = 30.00



DATA SET SYMBOL: (180046) \bigcirc CONFIGURATION DESCRIPTION: AMES 3.5-160 CA11B (B1CF4C507K3N8)(V87E18)(V5R5)

ELEVON	RUDDER	SPOILER	BD LAP
.000	.000	54.920	-14.250

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

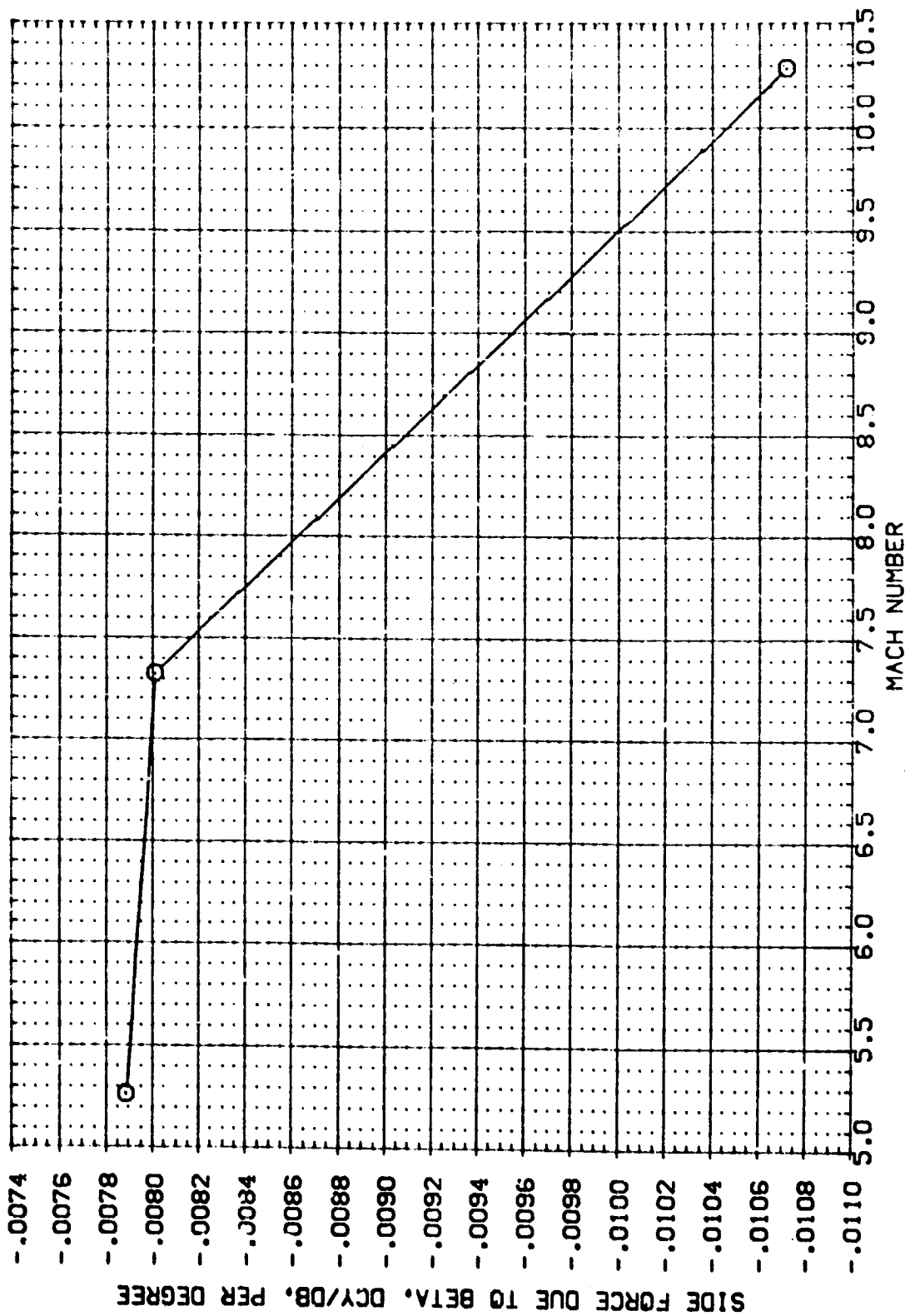


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(C) ALPHA = 35.00

DATA SET SYMBOL: (1B/046) \bigcirc CONFIGURATION DESCRIPTION: ARES 3.5-150 DA118 (B10F4C507M08)(V87E18)(V59S)

ELEVON: .000 RUDDER: .000 SPOBRK: 54.920 BOFLAP: -14.250

REFERENCE INFORMATION:

SREF	2690.0000	SO, FT.
LREF	474.8100	IN.
BREF	536.1500	IN.
XREF	1076.1500	IN.
YREF	.0000	IN.
ZREF	400.0000	IN.
SCALE	0.150	

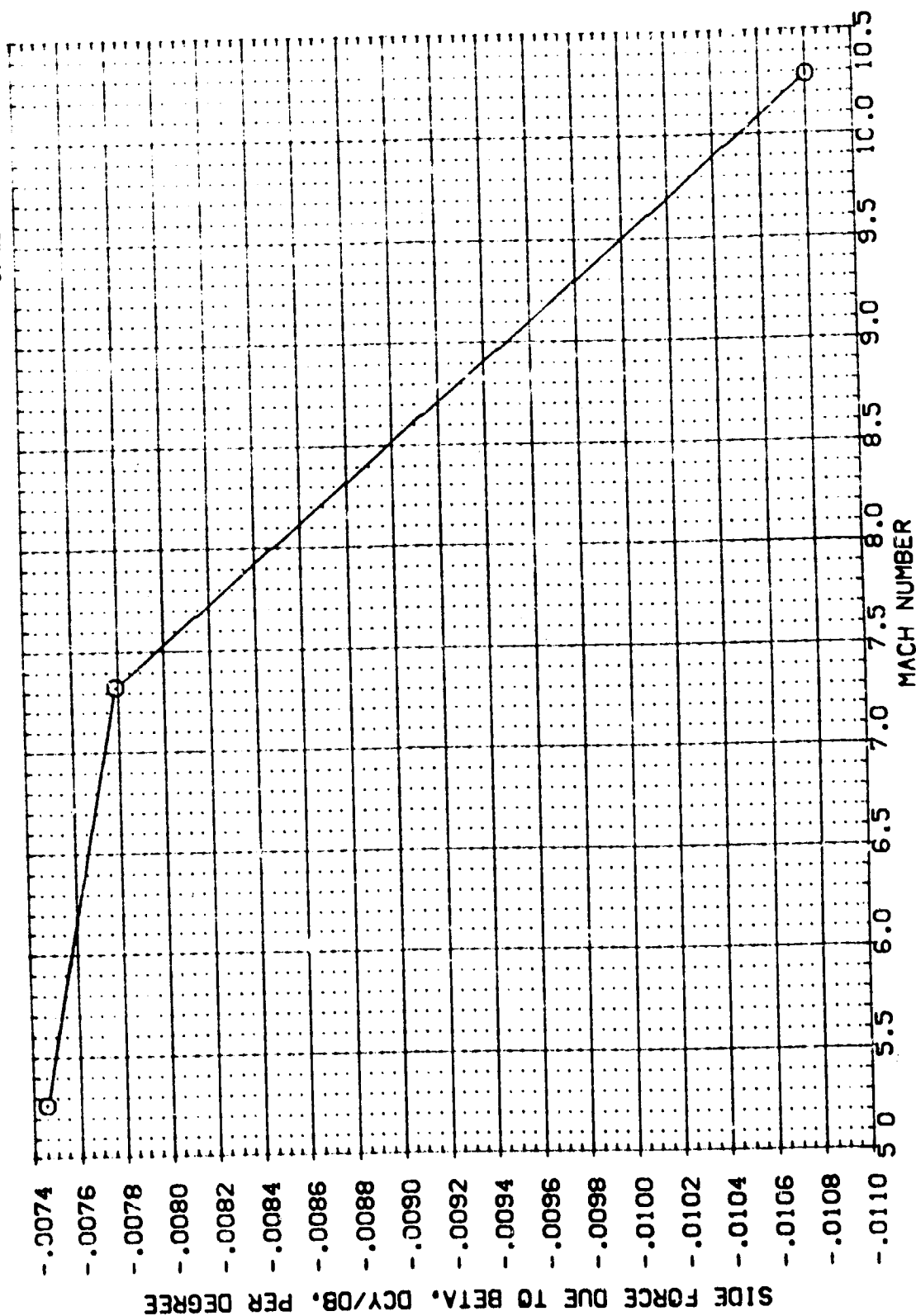


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(D) ALPHA = 40.00



DATA SET SYMBOL (18046) ○ CONFIGURATION DESCRIPTION AVES 3.5-160 GA11B (B10F4C507M3-8)(V67E18)(V59S)

ELEVON .000 RUDDER .000 SPOILER 80FLAP 54.920 -14.250

REFERENCE INFORMATION

SREF	2690.0000	50.000
LREF	474.8100	IN.
BREF	936.1800	IN.
XREF	1076.1800	IN.
YREF	1000.0000	IN.
ZREF	400.0000	IN.
SCALE	.0150	

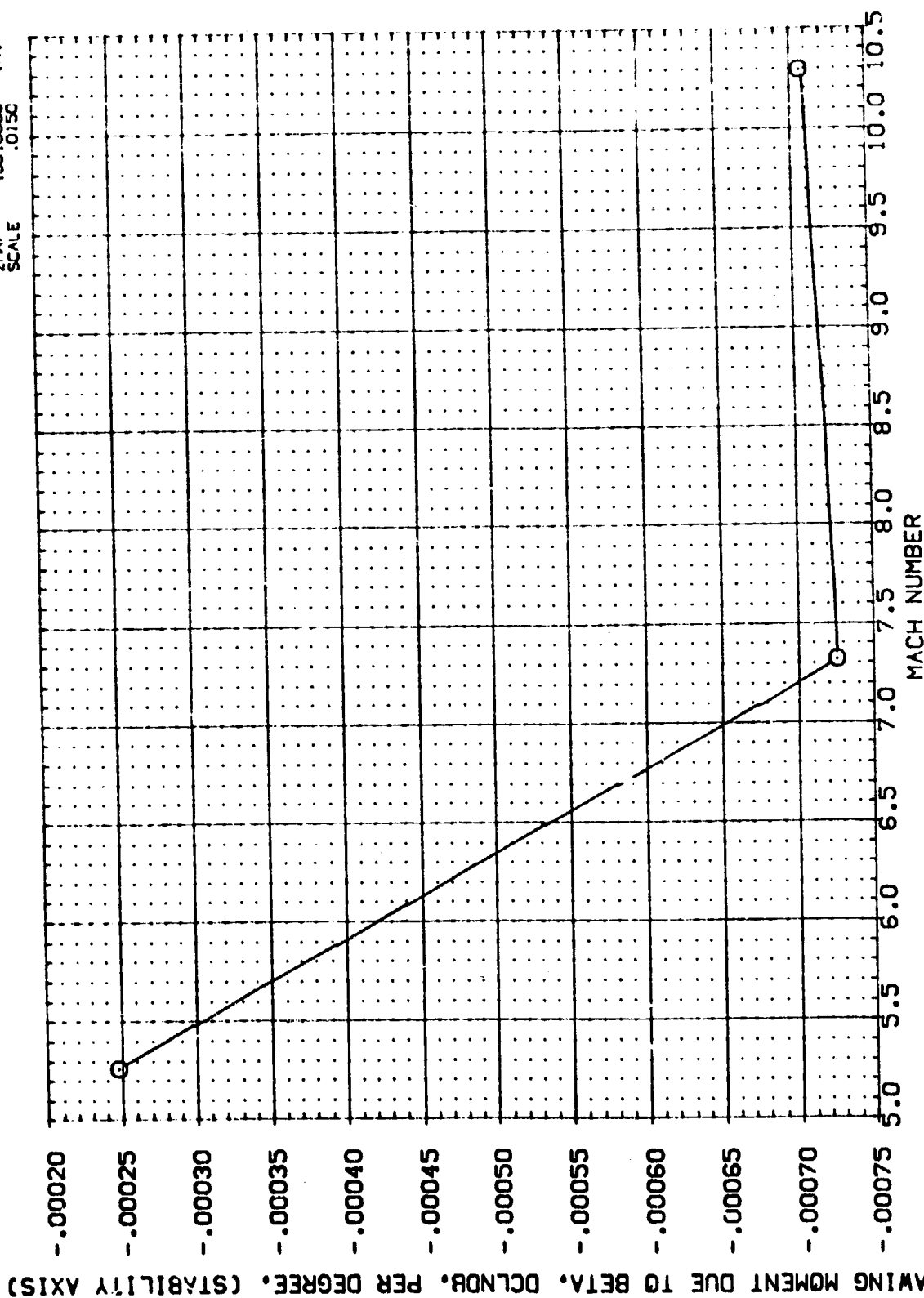


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(α) ALPHA = 25.00

DATA SET SYMBOL (18X046) ○ CONFIGURATION DESCRIPTION APES 3.5-160 0A11B (B10F4C507K3N8)(V87E18)(V5R5) ELEVON RUDDER SPDBRK BDFLAP REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 938.5000 IN. XREF 1076.4800 IN. YREF .0000 IN. ZREF 400.0000 IN. SCALE .0153

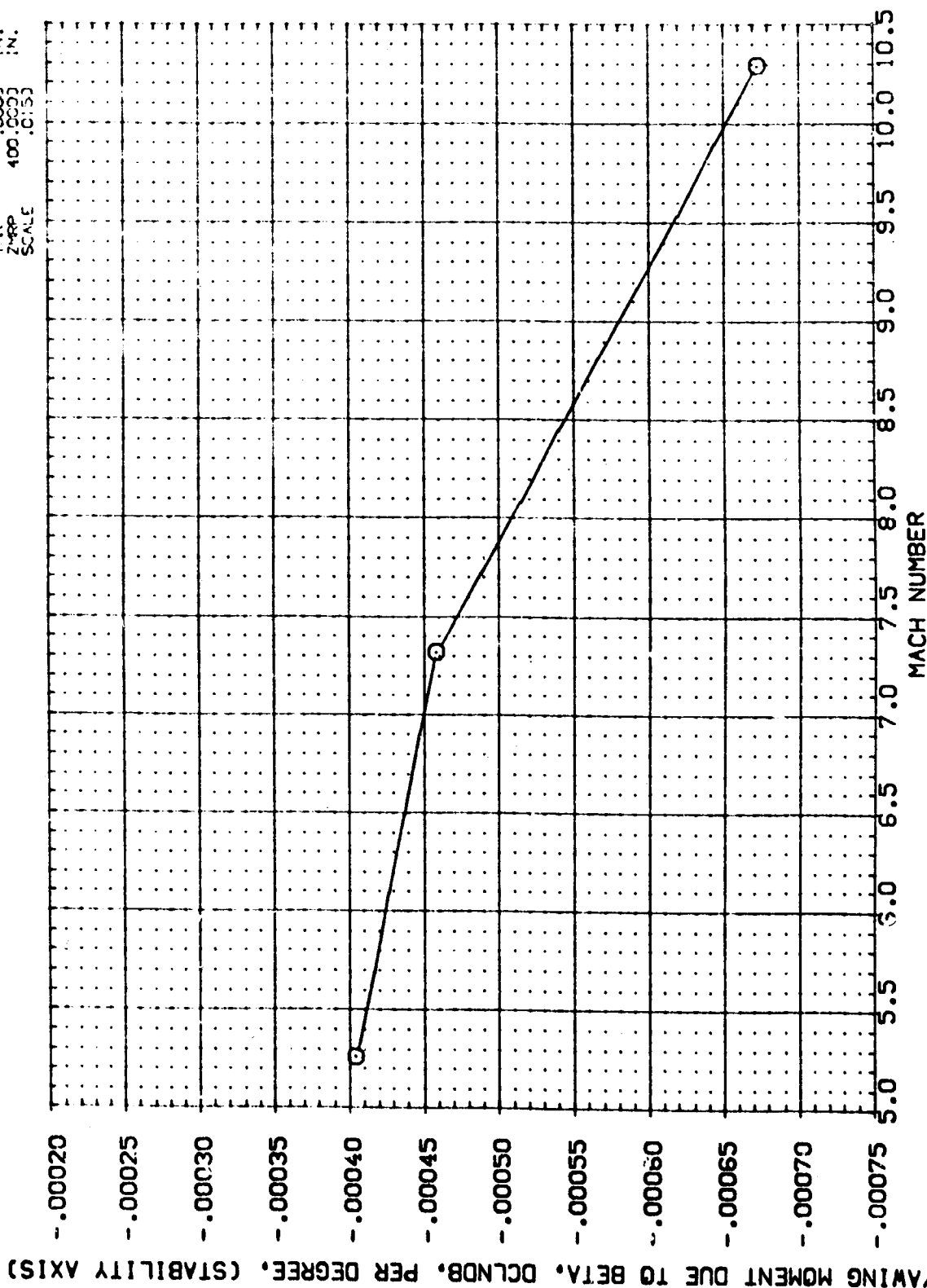


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(B) ALPHA = 30.00



DATA SET SYMBOL: (18046) ○ CONFIGURATION DESCRIPTION: ARES 3.5-160 0A11B (B10F4C507703-8)(V67E18)(V595)
 REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

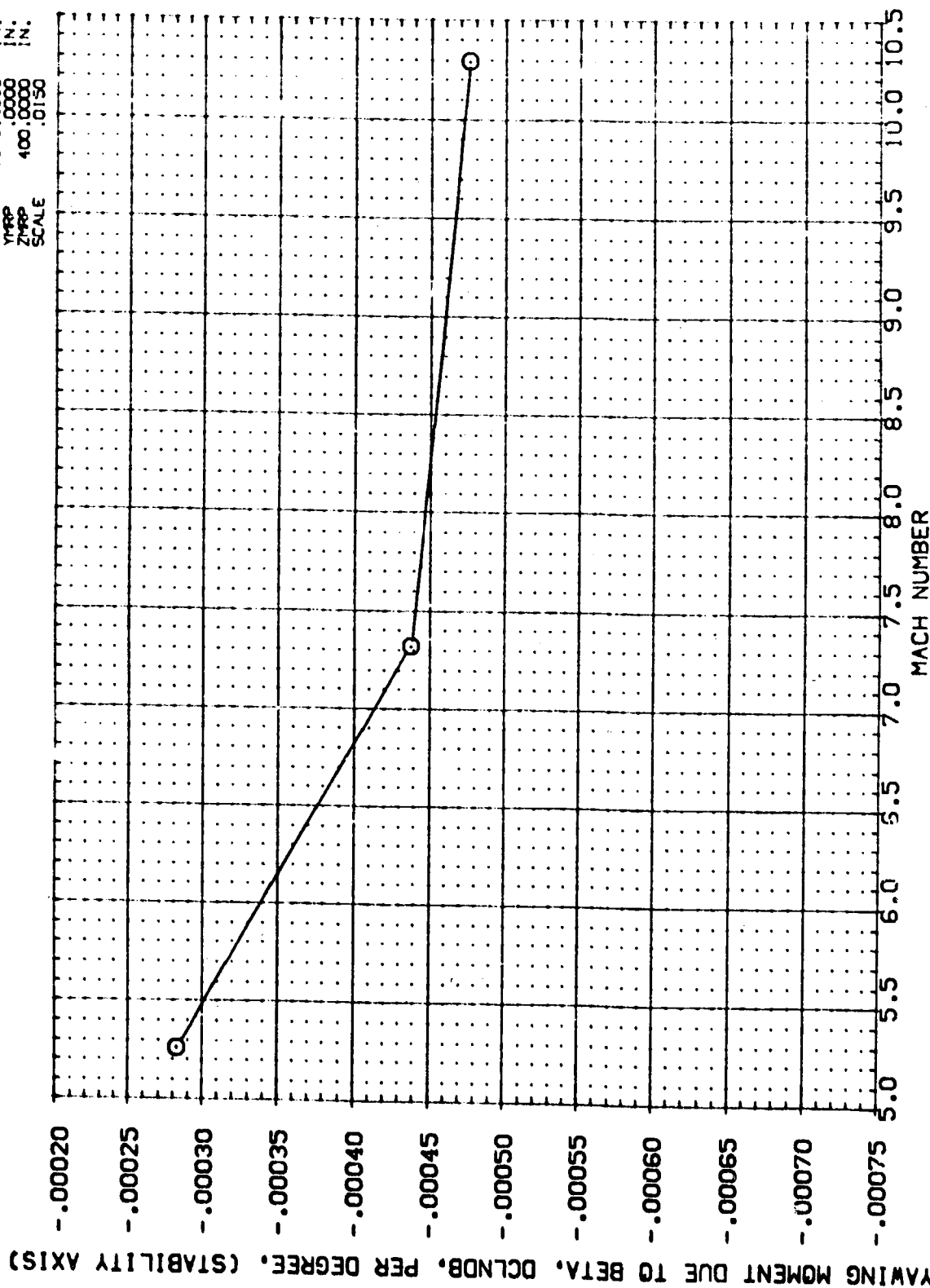


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(C) ALPHA = 35.00

DATA SET SYMBOL (19046) ○
 CONFIGURATION DESCRIPTION
 ARES 3.5-160 CA11B (810F4C50/M34B)(V87E18)(V5RS)

ELEVON .000
 RUDDER .000
 SPOBRK 54.920
 BDFLAP -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100
 BREF 936.6800
 XTRP 1076.4800
 YTRP 400.0000
 ZTRP 400.0000
 SCALE .0150

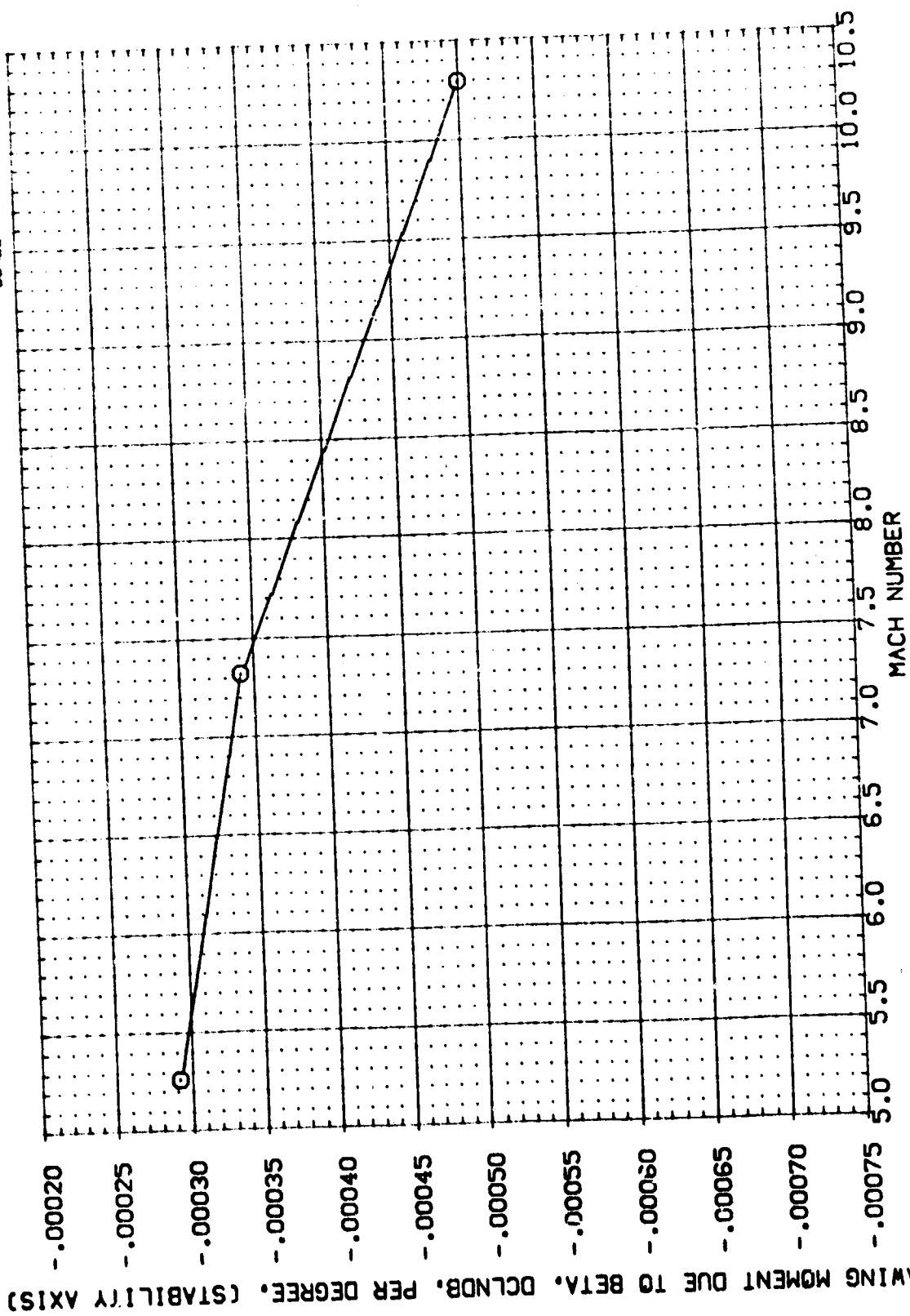


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(D) ALPHA = 40.00

DATA SET SYMBOL (180046) ○ CONFIGURATION DESCRIPTION AVES 3.5-160 0A11B (B10F4C507H3-8)(V67E18)(V5K5) ELEVON .000 RUDDER .000 SPOBRK 54.920 BOFLAP -14.250 REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 936.6800 IN. XPRP 1076.4800 IN. YPRP .0000 IN. ZPRP 400.0000 IN. SCALE .0150

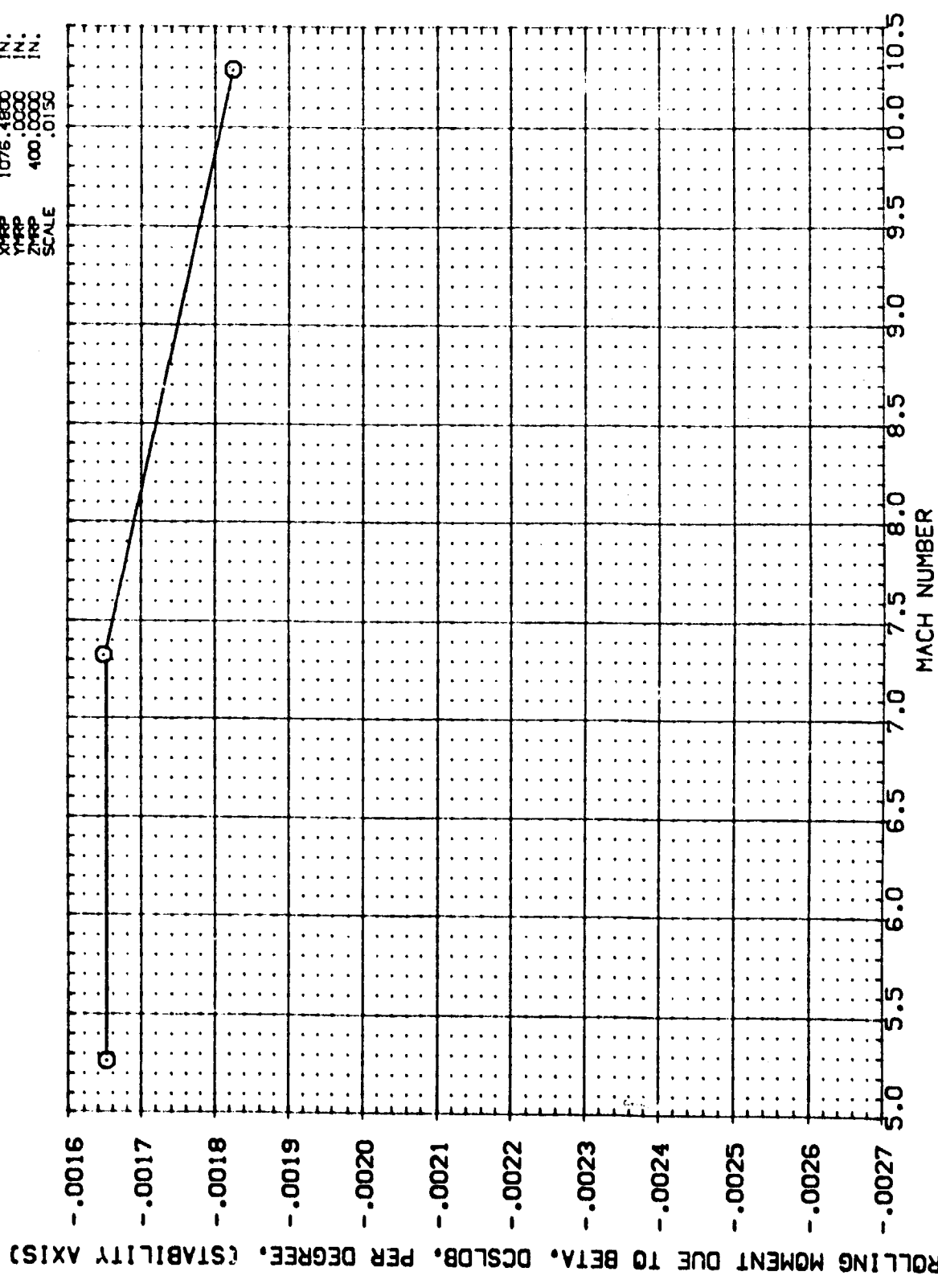


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER
(A) ALPHA = 25.00

DATA SET SYMBOL (18X046) ○ ARES 3.5-160 0A118 (B10F4C50703-8)(V87E18)(V59F5)

CONFIGURATION DESCRIPTION

REFERENCE INFORMATION

SREF 2690.000C 50.FT.

LREF 474.810C

BREF 936.680C

XMRP 1076.480C

YMRP 400.000C

ZMRP 400.000C

SCALE .015C

ELEVON .000

RUDER .000

S-DBRK 54.920

BOFLAP -14.250

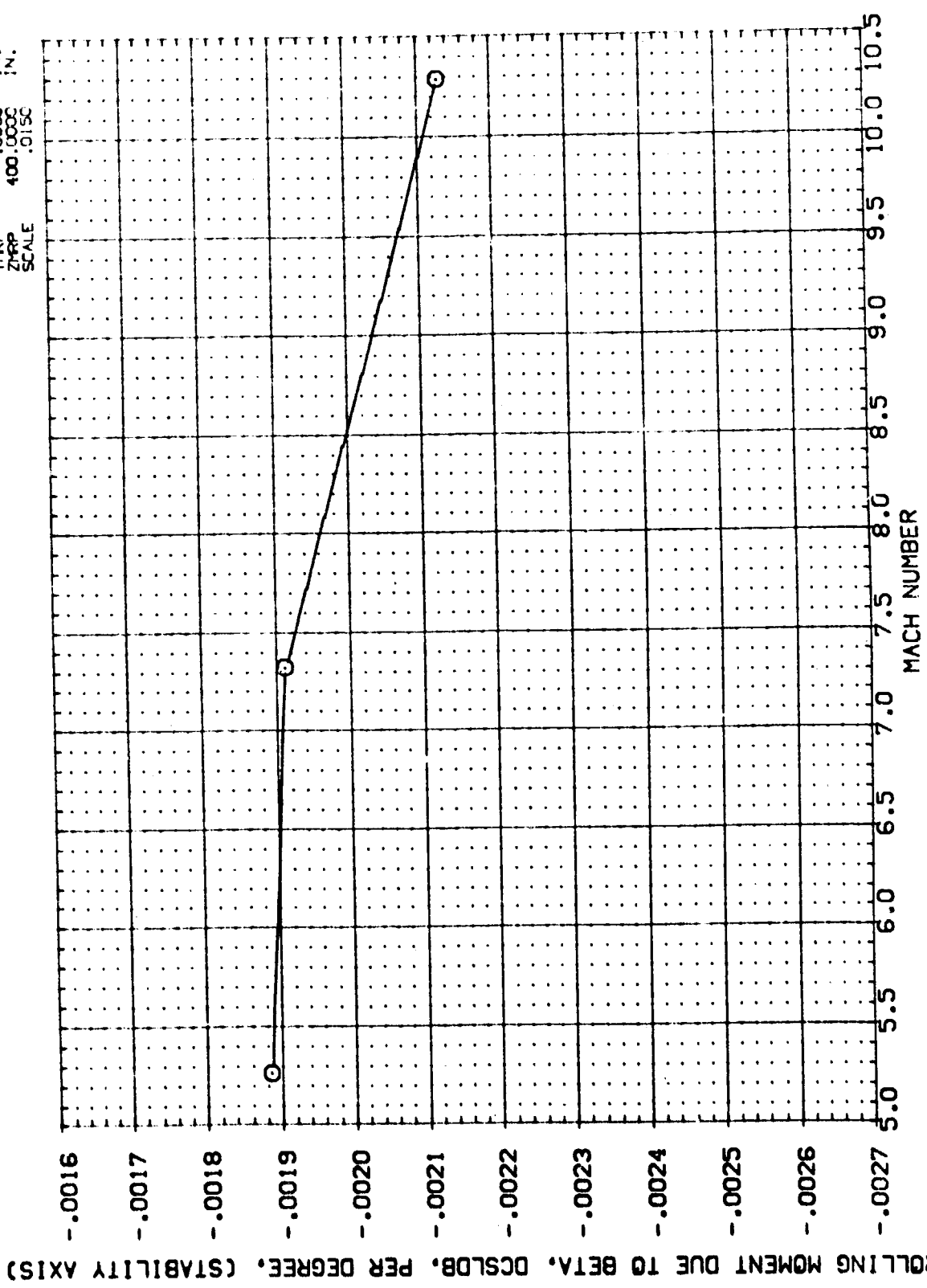


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(B) ALPHA = 30.00



DATA SET SYMBOL (18X046) \bigcirc CONFIGURATION DESCRIPTION AYES 3.5-160 DA118 (B10F4C507M3-8)(V87E18)(V595)

ELEVON .000 RUDDER .000 SPOILER 54.920 BOFLAP -14.250

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

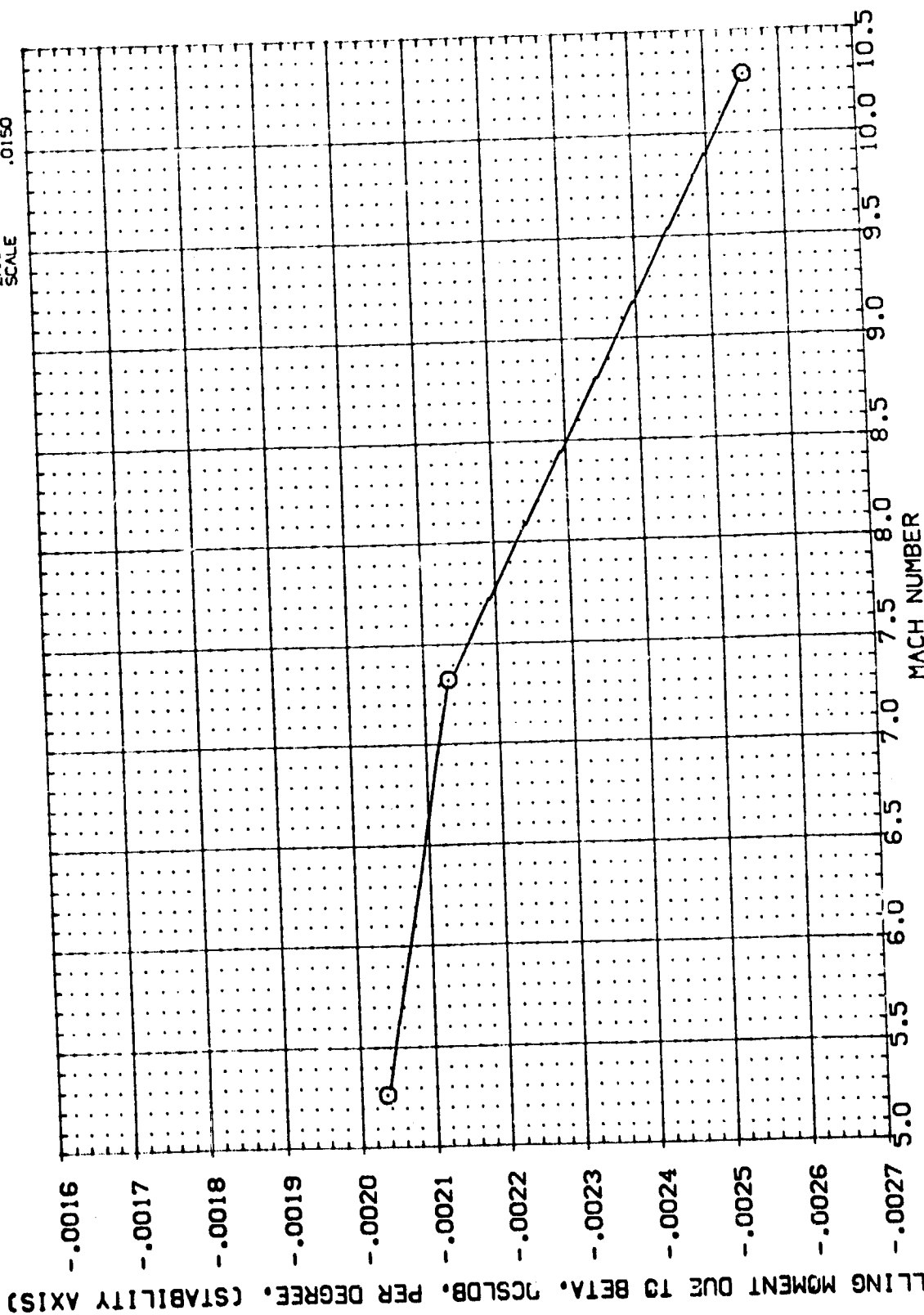


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(C) ALPHA = 35.00

DATA SET 51-800L CONFIGURATION DESCRIPTION
 (18045) O ARES 3.5-160 0A118 (B10F4C507K348)(V87E18)(V5P5)

ELEVON RUDDER SPOILER BOFLAP
 .000 .000 54.920 -14.250

REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

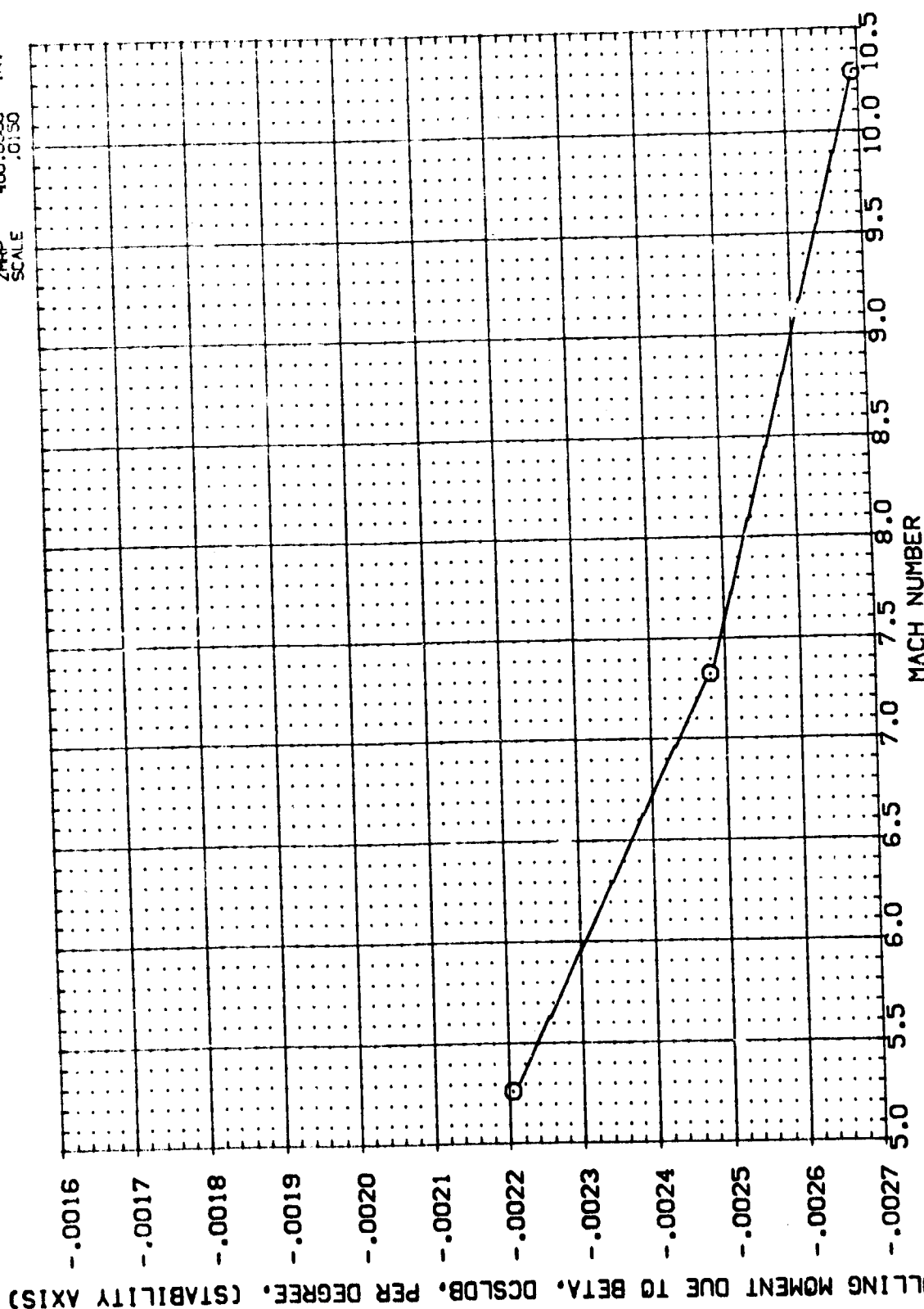


FIG. 3.C DERIVATIVE EFFECTS OF SIDESLIP WITH MACH NUMBER

(D) ALPHA = 40.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPUBRK	BOFLAP	REFERENCE INFORMATION
(88X050)	AVES 3.5-160 OA11B (B10F4C507M348)(V87E18)(VSR5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(88X057)	AVES 3.5-160 OA11B (B10F4C507M348)(V87E18)(VSR5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(88X047)	AVES 3.5-160 OA11B (B10F4C507M348)(V87E18)(VSR5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

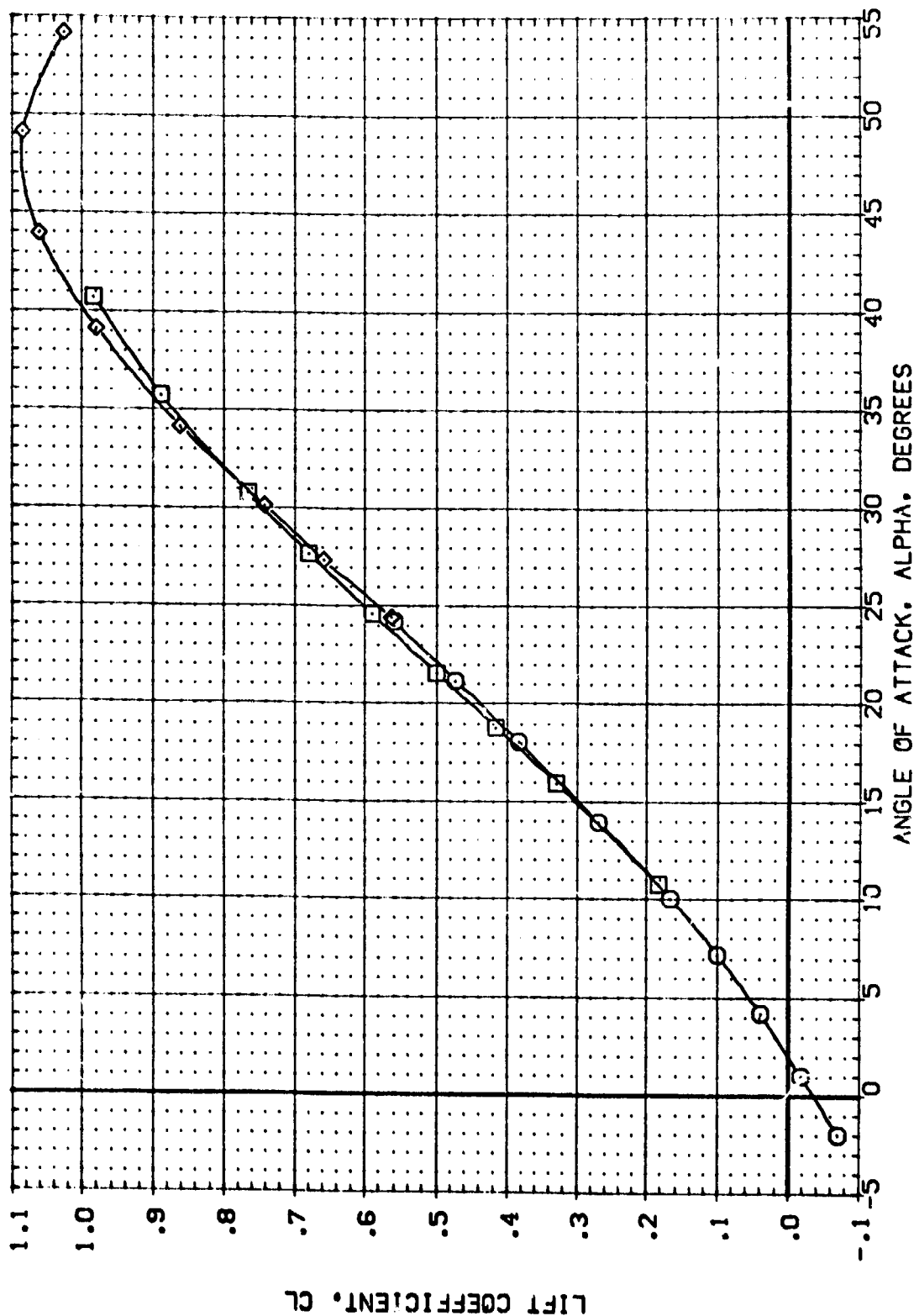


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	90%30K	BOFLAP	REFERENCE INFORMATION	SO.FT.
(BBX050)	AVES 3.5-160 DA118 (B10F4C507M3N8) (V87E18) (V5RS)	.000	.000	54.920	-14.250	SRF	2690.0000
(BBX057)	AVES 3.5-160 DA118 (B10F4C507M3N8) (V87E18) (V5RS)	.000	.000	54.920	-14.250	LRF	474.9100
(BBX047)	AVES 3.5-160 DA118 (B10F4C507M3N8) (V87E18) (V5RS)	.000	.000	54.920	-14.250	BRF	935.6800
						AMRP	1076.4800
						YMRP	.0000
						ZMRP	400.0000
						SCALE	.0150

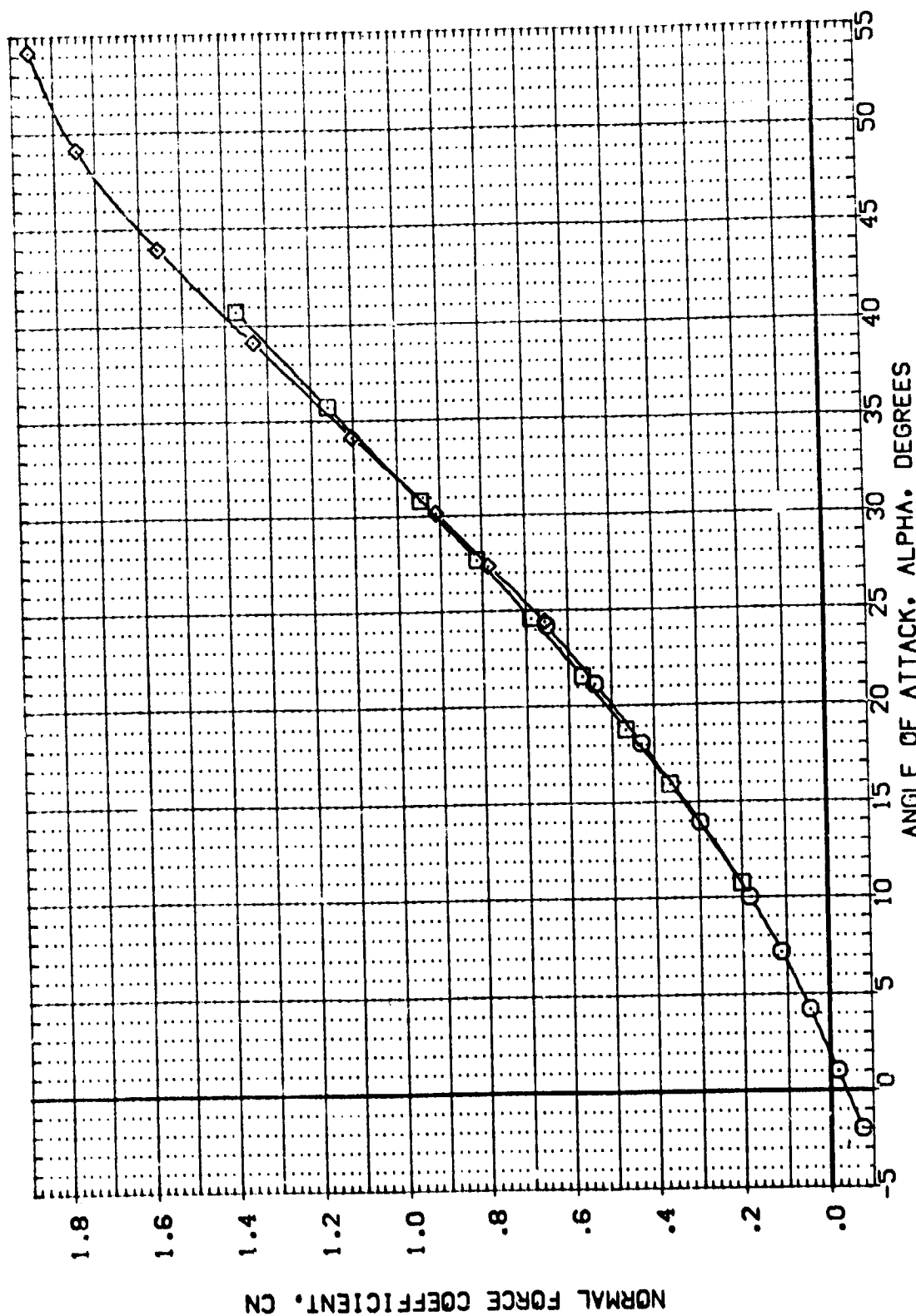


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPORCK	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 OA11B (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX057)	AVES 3.5-160 OA11B (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.870 IN.
(BBX047)	AVES 3.5-160 OA11B (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YMRP 1076.48 IN.
						ZMRP .0000 IN.
						SCALE 400.0000 IN.

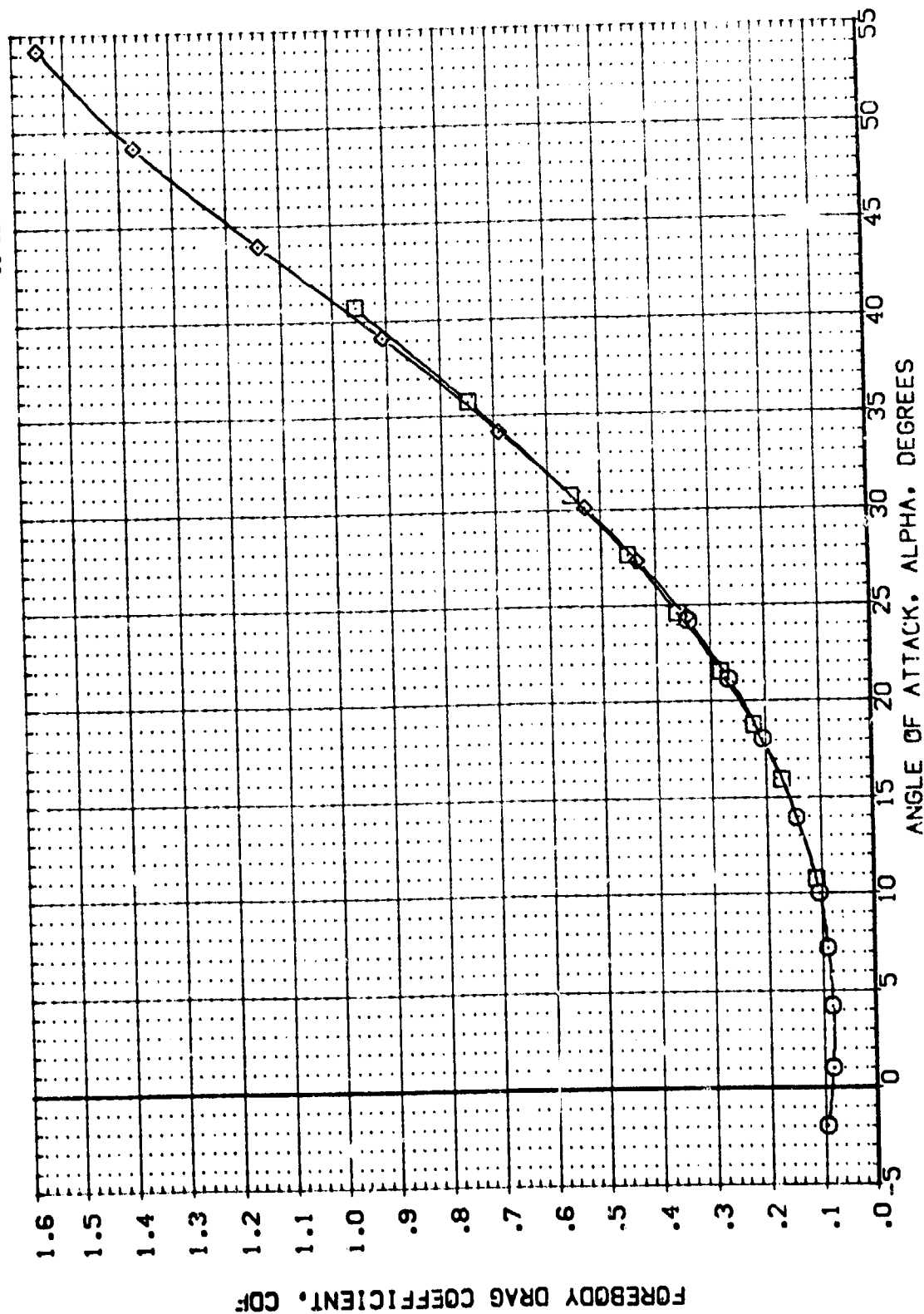
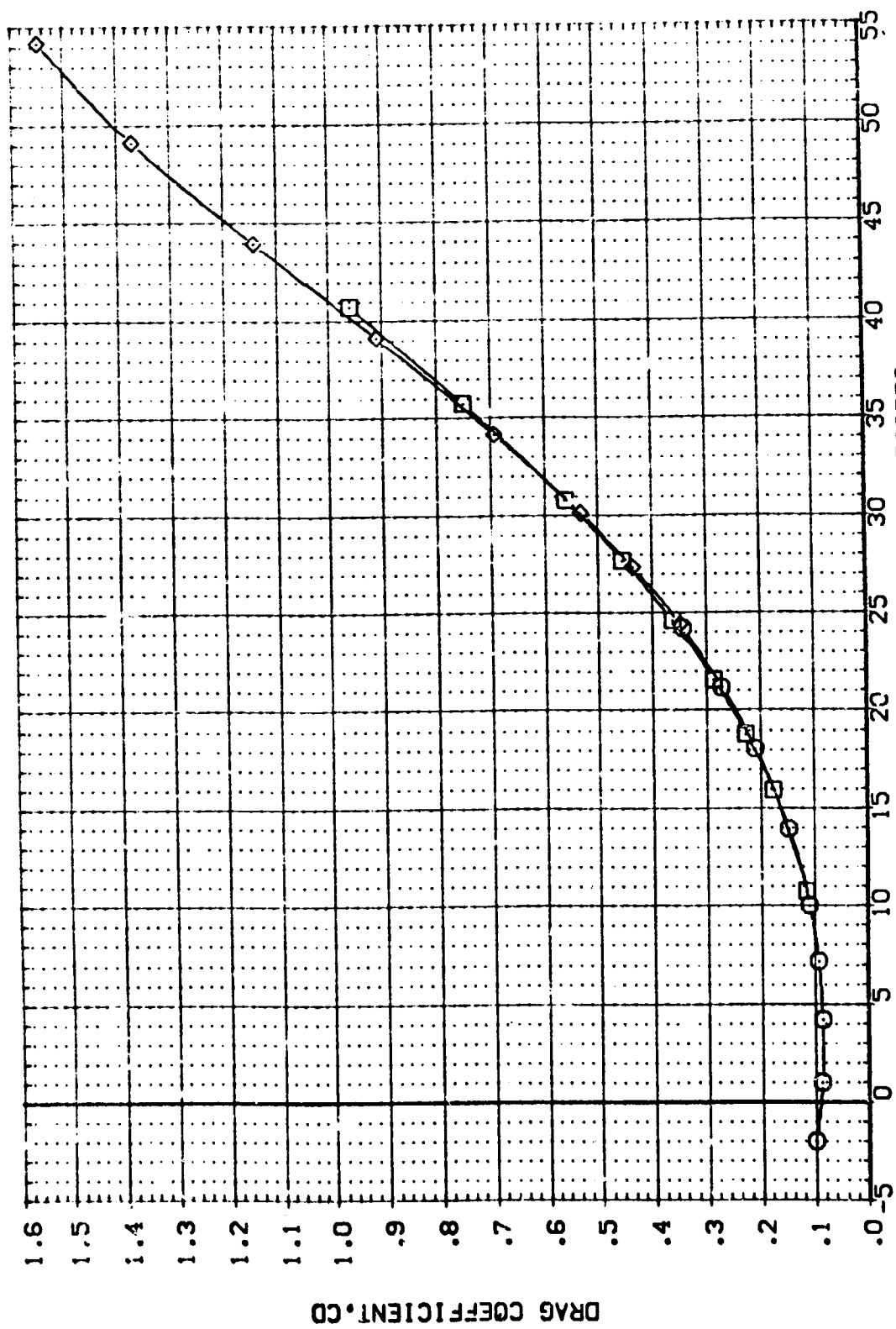


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	FLEVEN	RUDDER	SP008K	BOFLAP	REFERENCE INFORMATION
48X050	AMES 3.5-160 OA119 (B10F4CS07M3-8) (V87E18) (VSRS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
48X067	AMES 3.5-160 OA118 (B10F4CS07M3-8) (V87E18) (VSRS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
48X047	AMES 3.5-160 OA118 (B10F4CS07M3-8) (V87E18) (VSRS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YREF 1076.4800 IN.
						XREF .0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPORON	BOFLAP	REFERENCE INFORMATION
(BBK050)	AMES 3.5-160 OA118 (B10F4C507K3N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBK057)	AMES 3.5-160 OA119 (B10F4C507K3N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	LREF 174.8100 IN.
(BBK047)	AMES 3.5-160 OA111 (B10F4C507K3N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

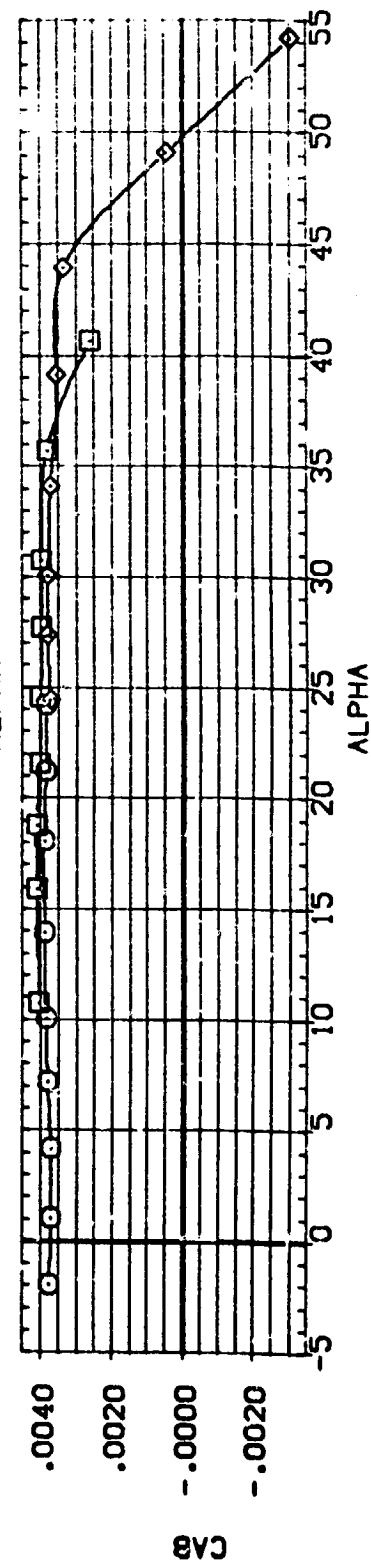
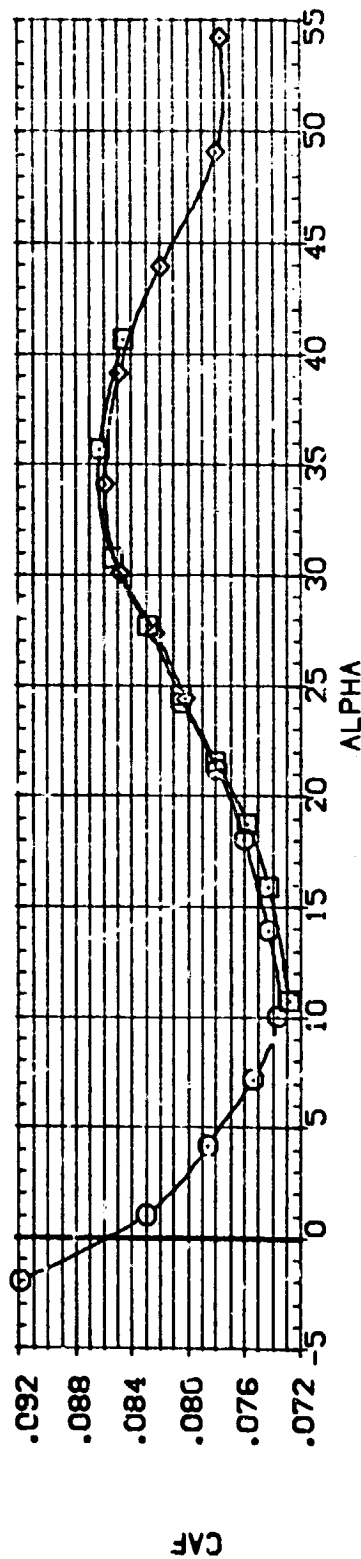
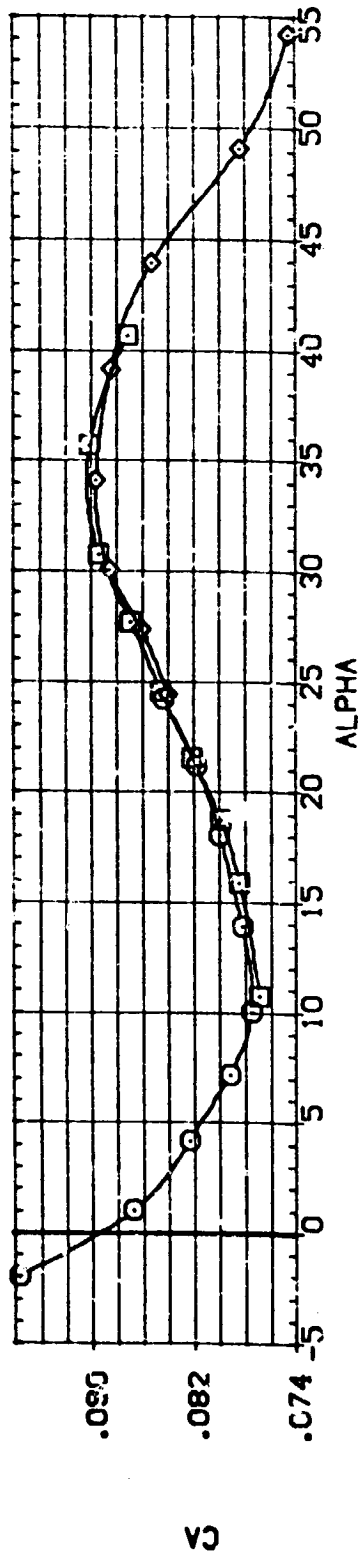


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (BBX05) (BBX04) (BBX04)

CONFIGURATION DESCRIPTION:
 AVES 3.5-160 0A11B (BIDF4C507M3-8) (V87E18) (V5FR5)
 AVES 3.5-160 0A11B (BIDF4C507M3-8) (V87E18) (V5FR5)
 AVES 3.5-160 0A11B (BIDF4C507M3-8) (V87E18) (V5FR5)

ELEVON: .000 .000 .000

RUDDER: .000 .000 .000

SPDBRK: 54.920 54.920 54.920

BOFLAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION:
 SREF: 2690.000 50.FT.
 LREF: 474.800 N.
 BRFF: 9.5.18.00 N.
 YPRP: 10.6.4.0 N.
 ZPRP: .0000 N.
 ZPRP: 400.0070 N.
 SCALE: 0.50

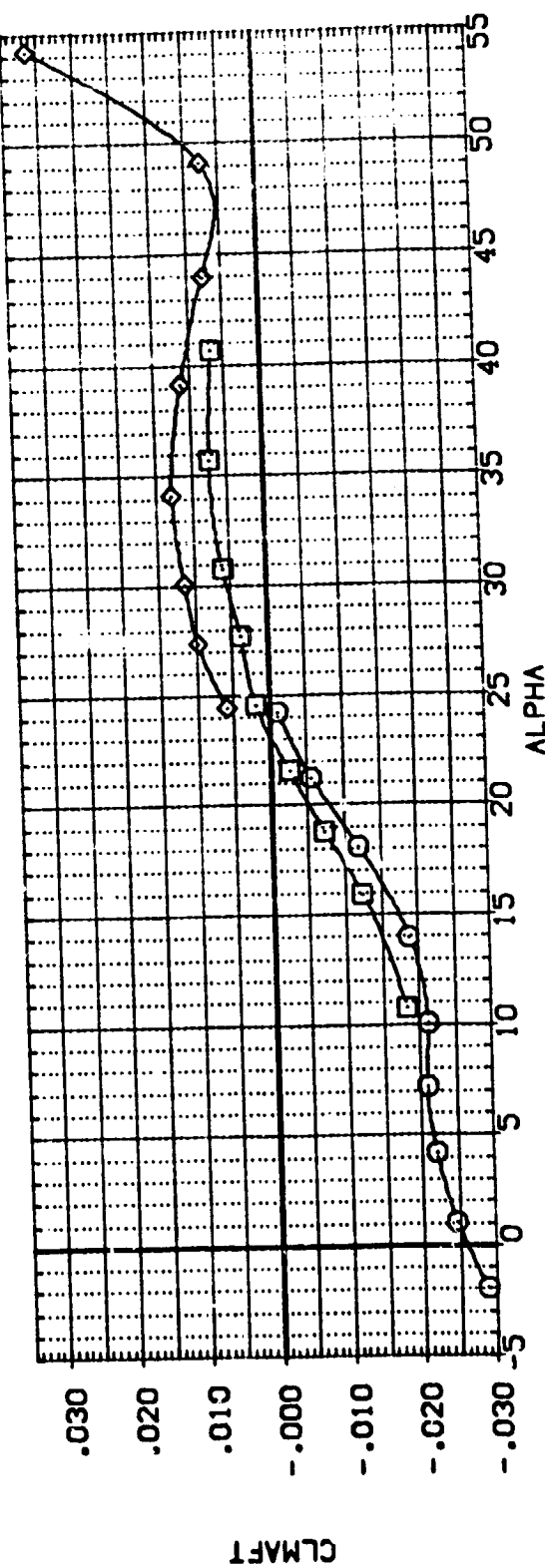
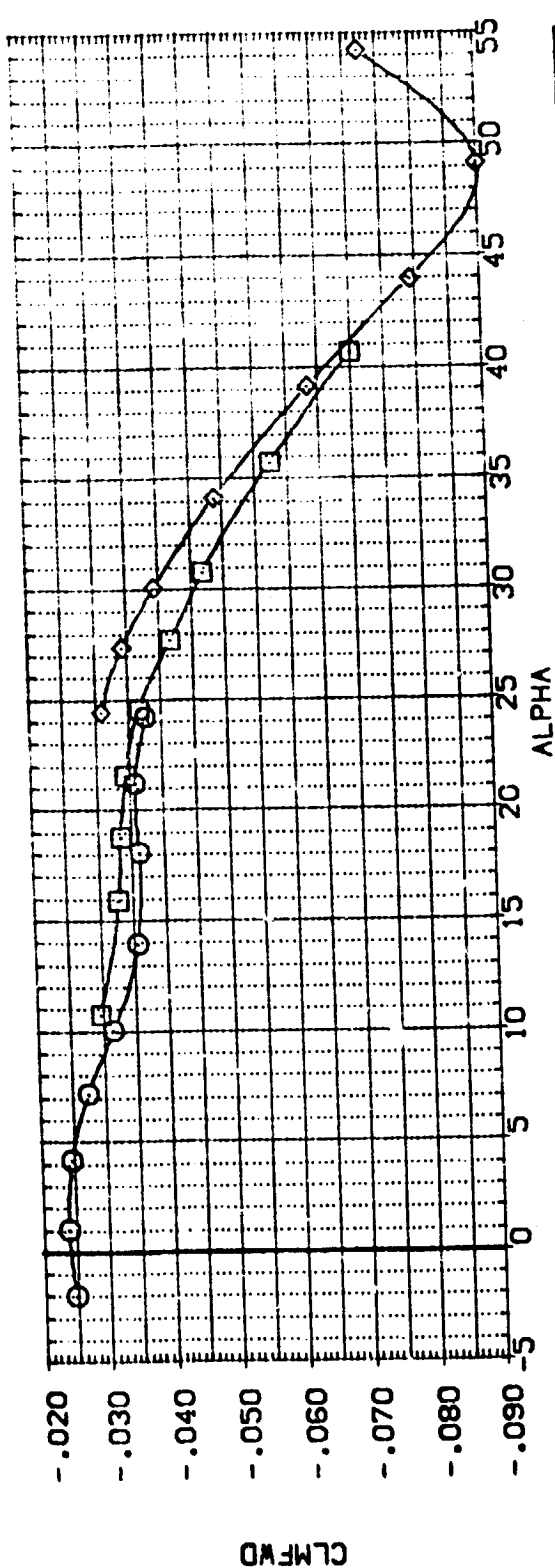


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(88X050)	AVES 3.5-160 CA11B (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(88X057)	AVES 3.5-160 CA11B (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(88X047)	AVES 3.5-160 CA11B (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XTRP 1076.4800 IN.
						YTRP 400.0000 IN.
						ZTRP 0.0150
						SCALE

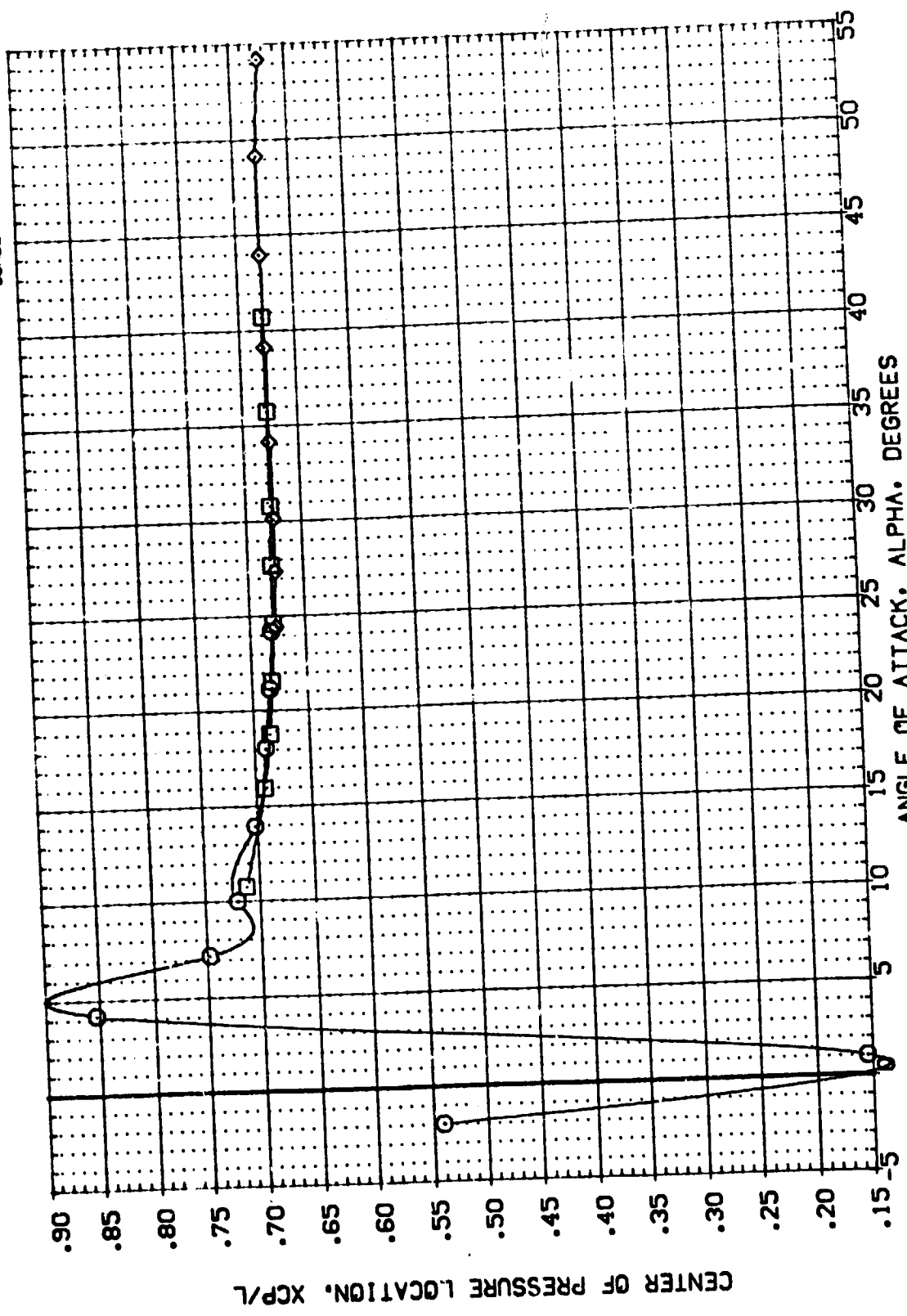


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)M/CH = 5.26

DATA SET SYMBOL: (BBX050) (BBX067) (BBX047)

CONFIGURATION DESCRIPTION: AYES 3.5-160 CA11B (B10F4C507H348) (W87E18) (V59S) AYES 3.5-160 CA11B (B10F4C507H348) (W87E18) (V59S) AYES 3.5-160 CA11B (B10F4C507H348) (W87E18) (V59S)

ELEVON: .000 .000 .000

RUDDER: .000 .000 .000

SPOILER: S4.920 S4.920 S4.920

BOFLAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 936.6800 IN. XREF 1076.4870 IN. YREF .0000 IN. ZREF 400.0000 IN. SCALE .0150

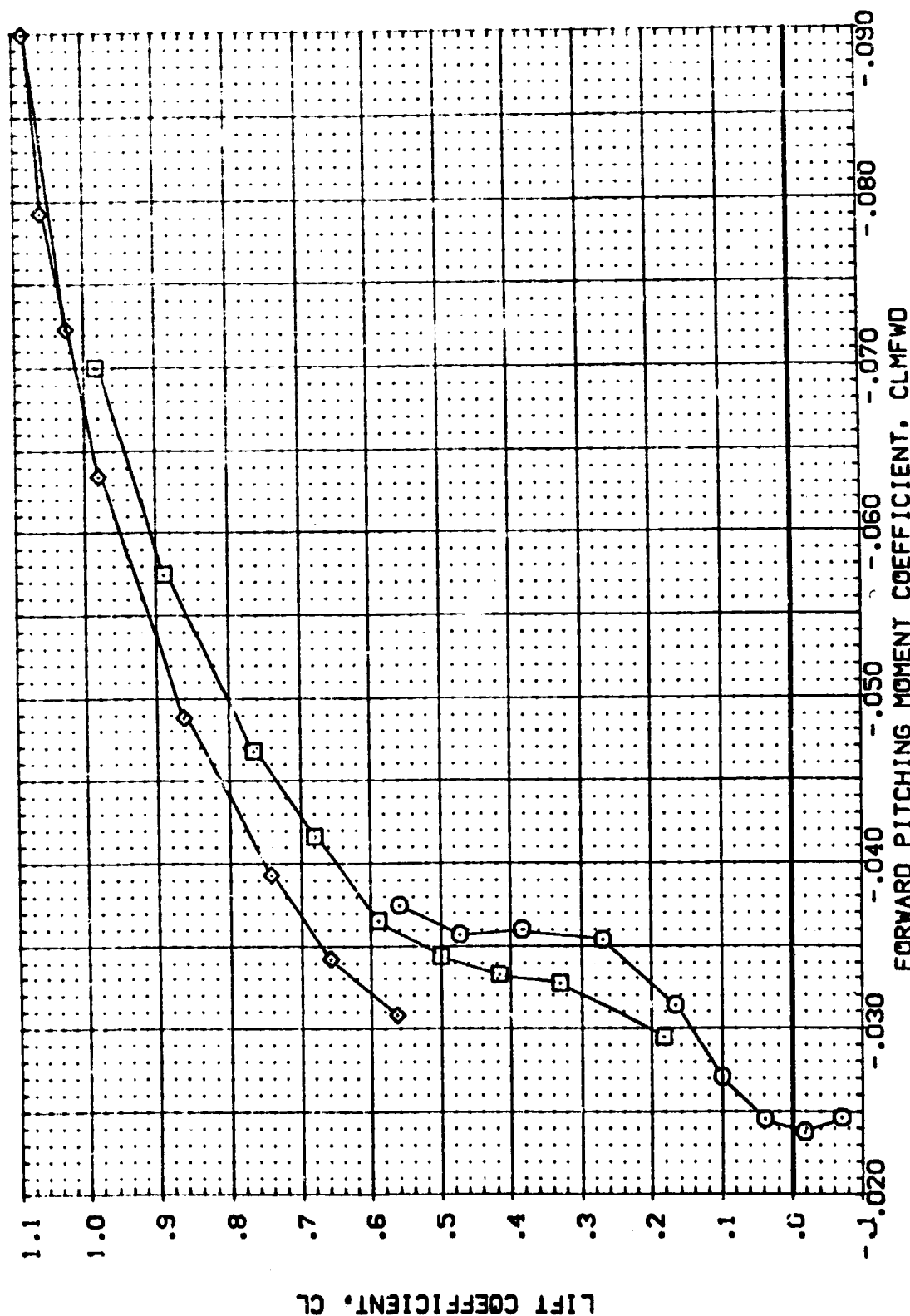
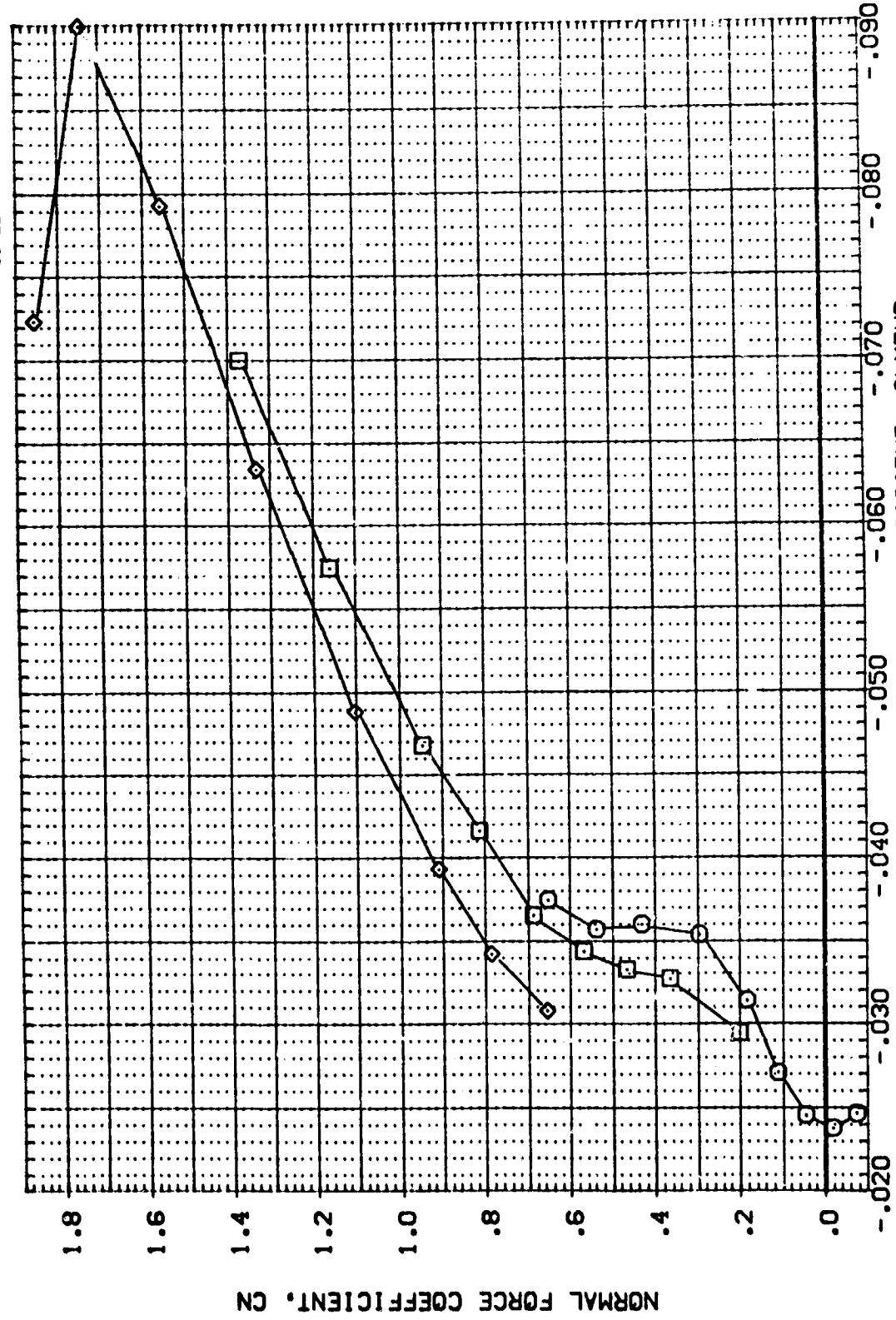


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBK050)	AVES 3.5-160 CA11B (B10F4C507H3N8) (V87E18) (V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(BBK067)	AVES 3.5-160 CA11B (B10F4C507H3N8) (V87E18) (V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBK047)	AVES 3.5-160 CA11C (B10F4C507H3N8) (V87E18) (V5R5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBO.	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX050)	AVES 3.5-160 0A11B (810F4C507K3-8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2680.0000 SQ.FT.
(BBX057)	AVES 3.5-160 0A11B (810F4C507K3-8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	LREF 174.1700
(BBX047)	AVES 3.5-160 0A11B (810F4C507K3-8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	BREF 93.0800
						YMRP 1076.4000
						ZMRP .0000
						SCALE 400.0000

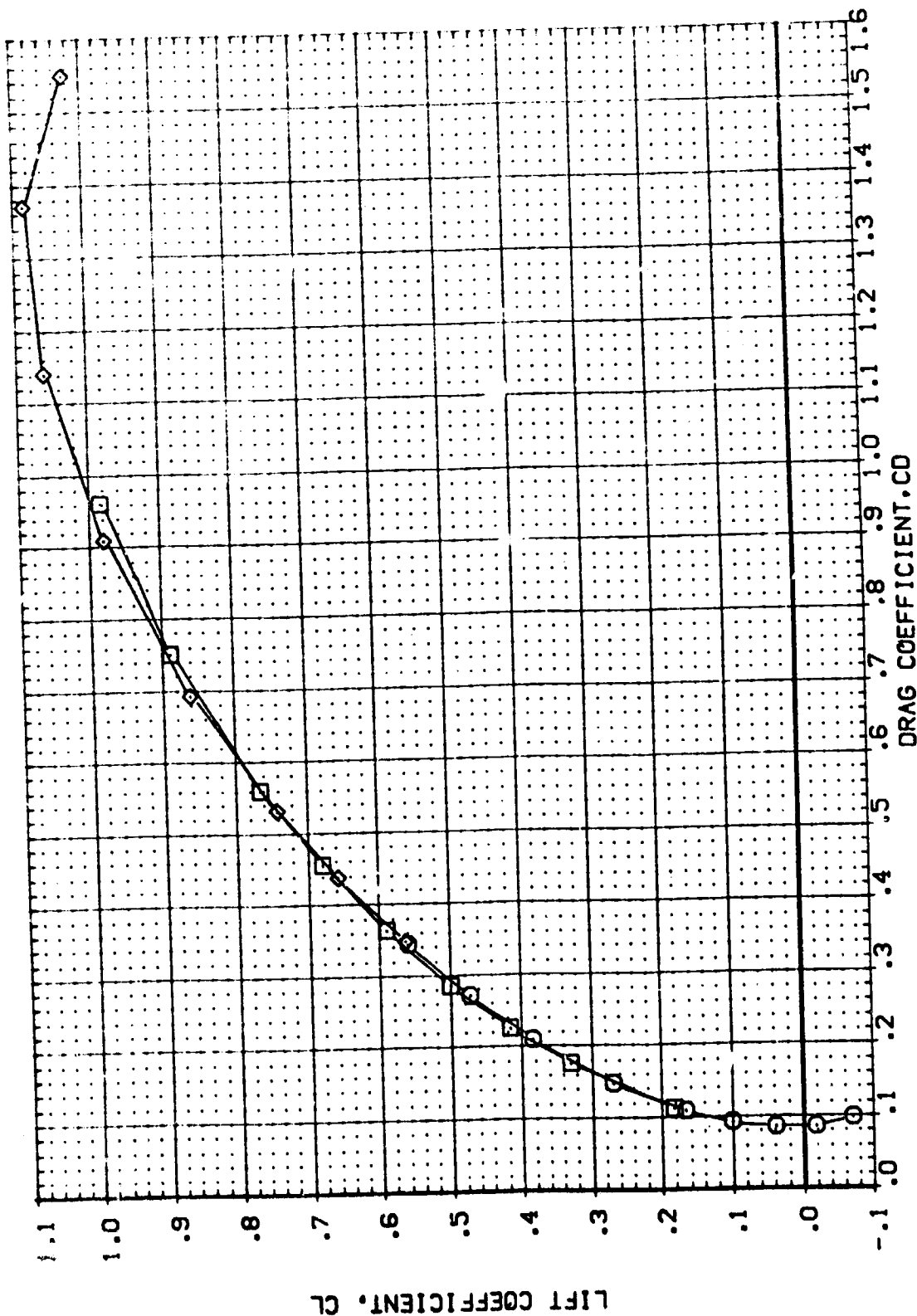


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(ABR050)	AVES 3.5-160 CA11B (B10F4C507H34G)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(ABR057)	AVES 3.5-160 CA11B (B10F4C507H34G)(V87E18)(V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(ABR047)	AVES 3.5-160 CA11B (B10F4C507H34G)(V87E18)(V5R5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XTRP 1076.4800 IN.
						YTRP 400.0000 IN.
						ZTRP 400.0000 IN.
						SCALE .0150

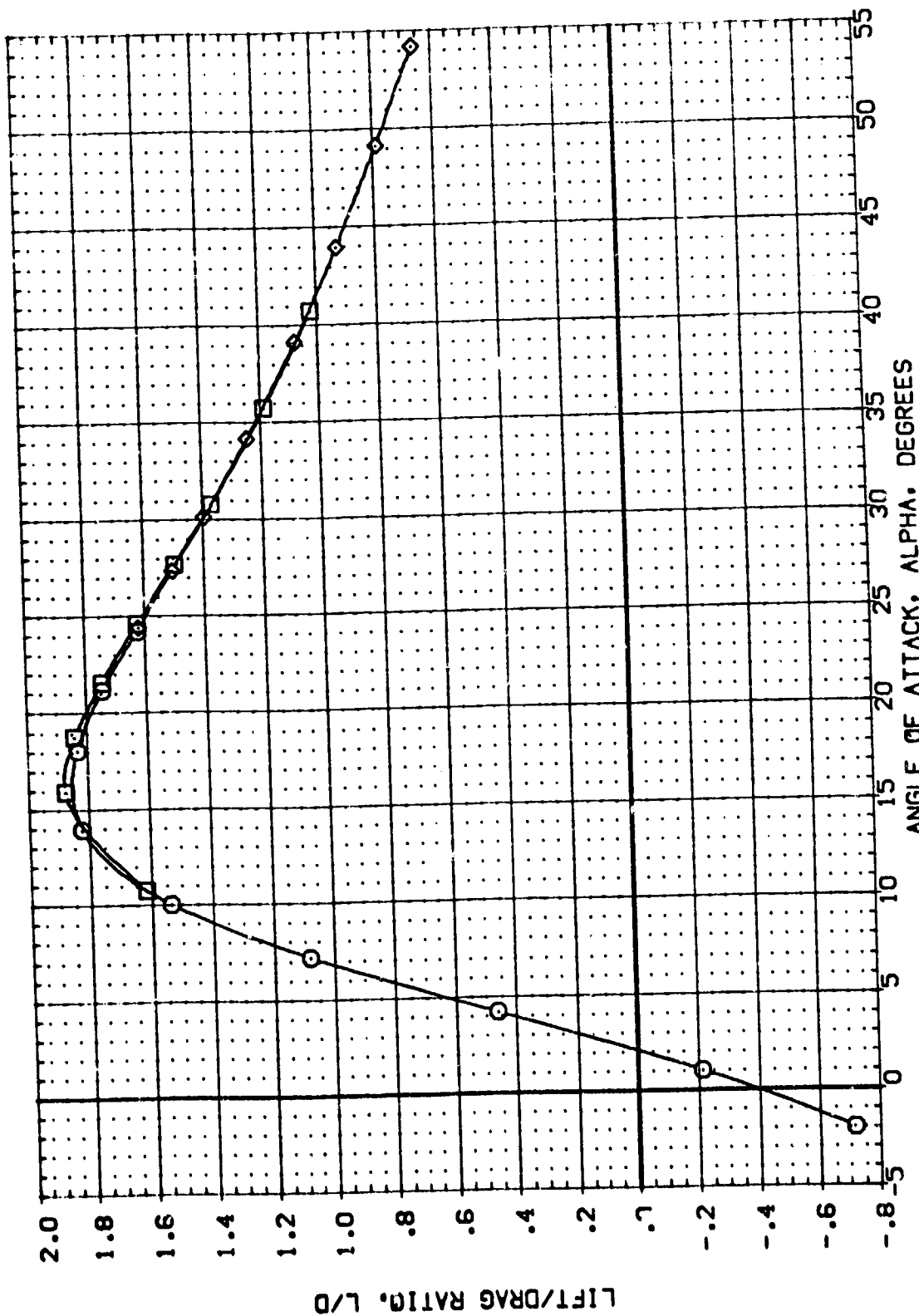


FIG. 4.A.1 MACH 5.26 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (BBK007) (BBK008) (BBK052)

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 DA:1B (B10F4C507H3-8)(V87E18)(V3K5)
 AYES 3.5-160 DA:1B (B10F4C507H3-8)(V87E18)(V3K5)
 AYES 3.5-160 DA:1B (B10F4C507H3-8)(V87E18)(V3K5)

ELEVON: .000 .000 .000

RUDER: .000 .000 .000

SPOILER: 54.920 54.920 54.920

BOFLAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100
 BREF: 536.6820
 XMRP: 1076.4800
 YMRP: .0000
 ZMRP: 400.0000
 SCALE: .0150

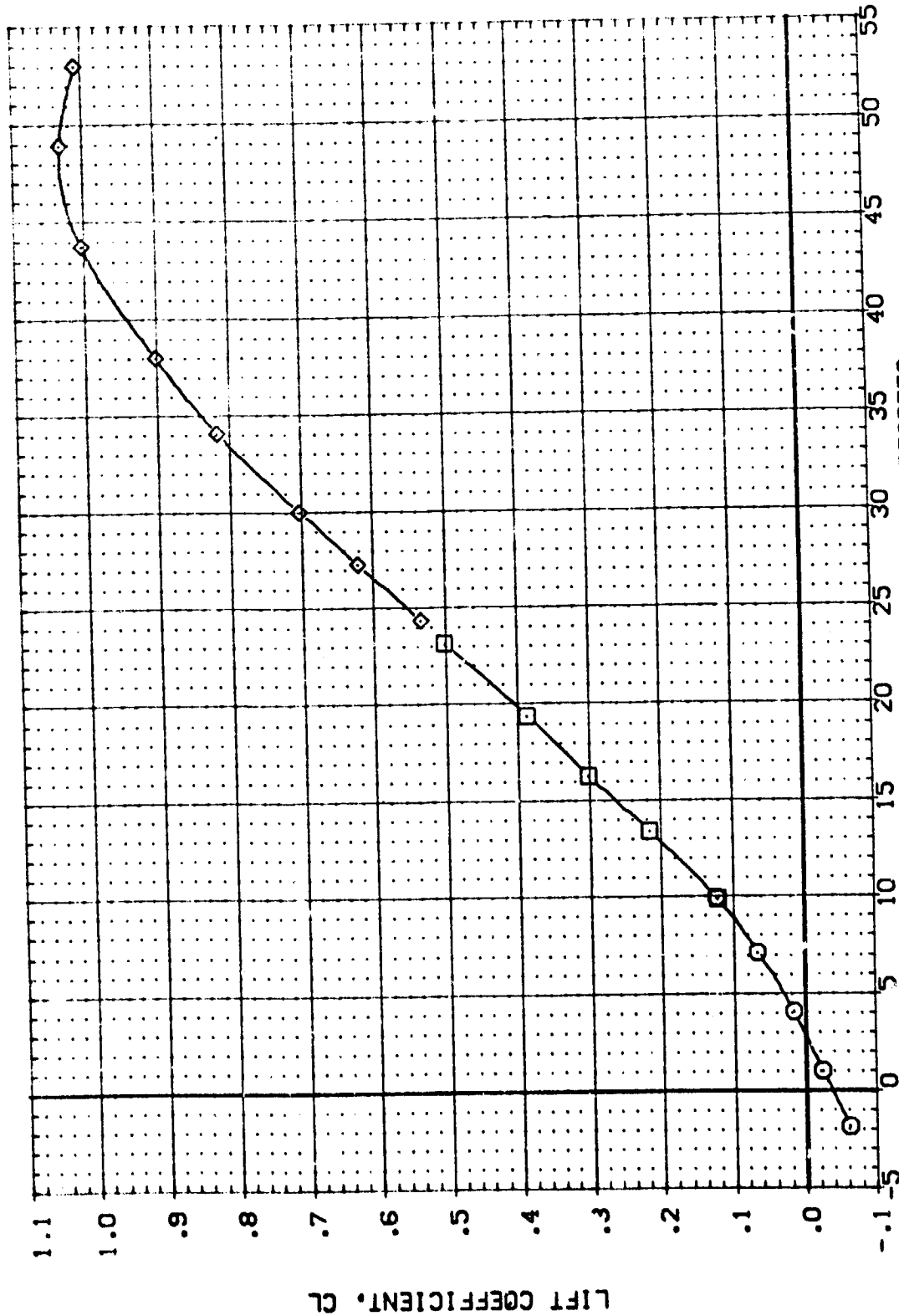


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS
 (A)MACH = 7.32

DATA SET SYMBO.	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRBK	BOFLAP	REFERENCE INFORMATION
(BEX007)	AVES 3.5-160 0A11B (B10F4C507N3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BEX008)	AVES 3.5-160 0A11B (B10F4C507N3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BEX052)	AVES 3.5-160 0A11B (B10F4C507N3N8)(V87E18)(V5K5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP .0000 IN.
						SCALE 400.0000 IN.

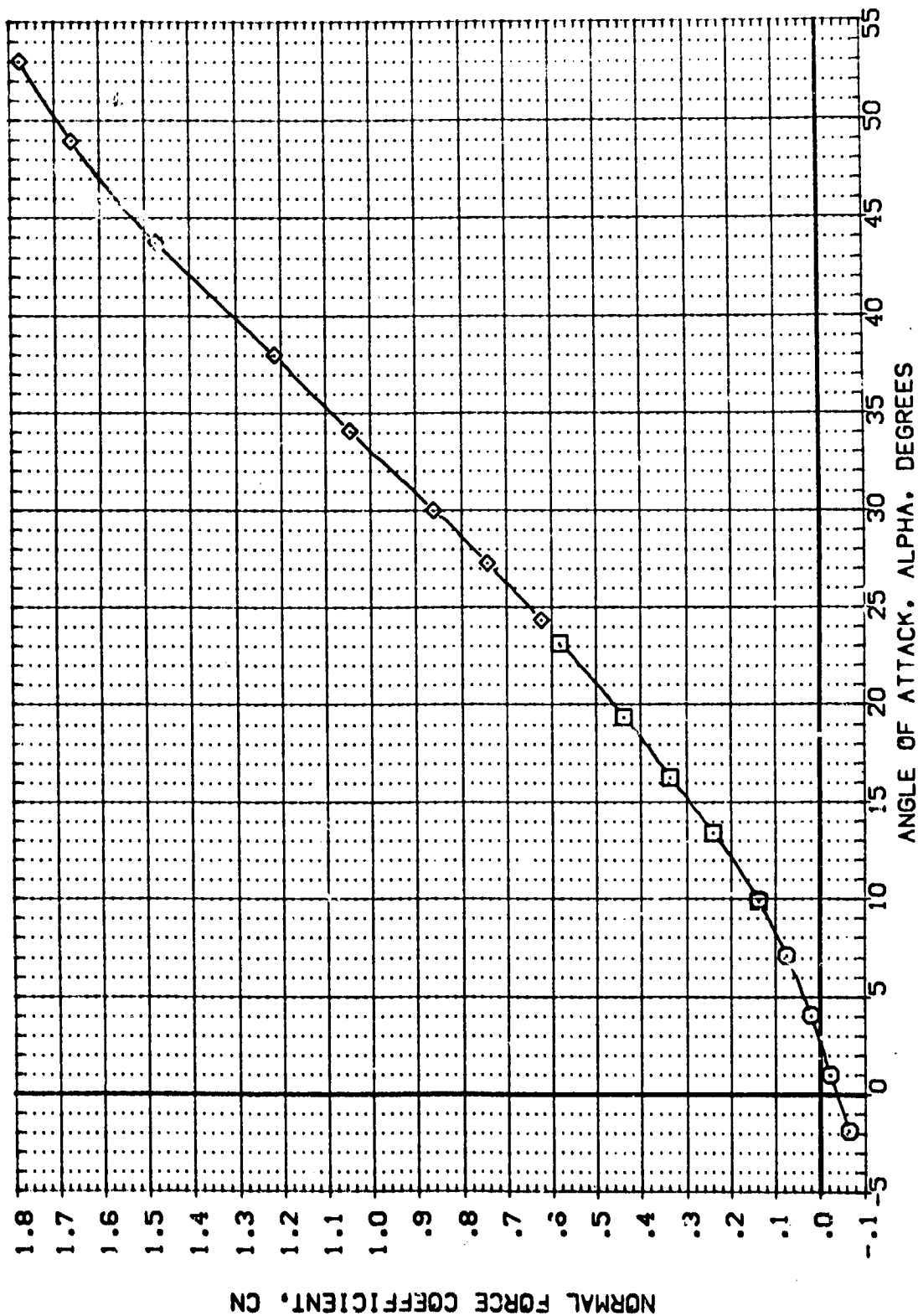


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(88X007)	APES 3.5-160 (810F4C507M3B8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2630.0000 50.FT.
(88X008)	APES 3.5-160 (810F4C507M3B8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 0
(88X052)	APES 3.5-160 (810F4C507M3B8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6900 0
						XMRP 1076.4820 0
						VMRP .0000 0
						ZMRP 400.0000 0
						SCALE .0150

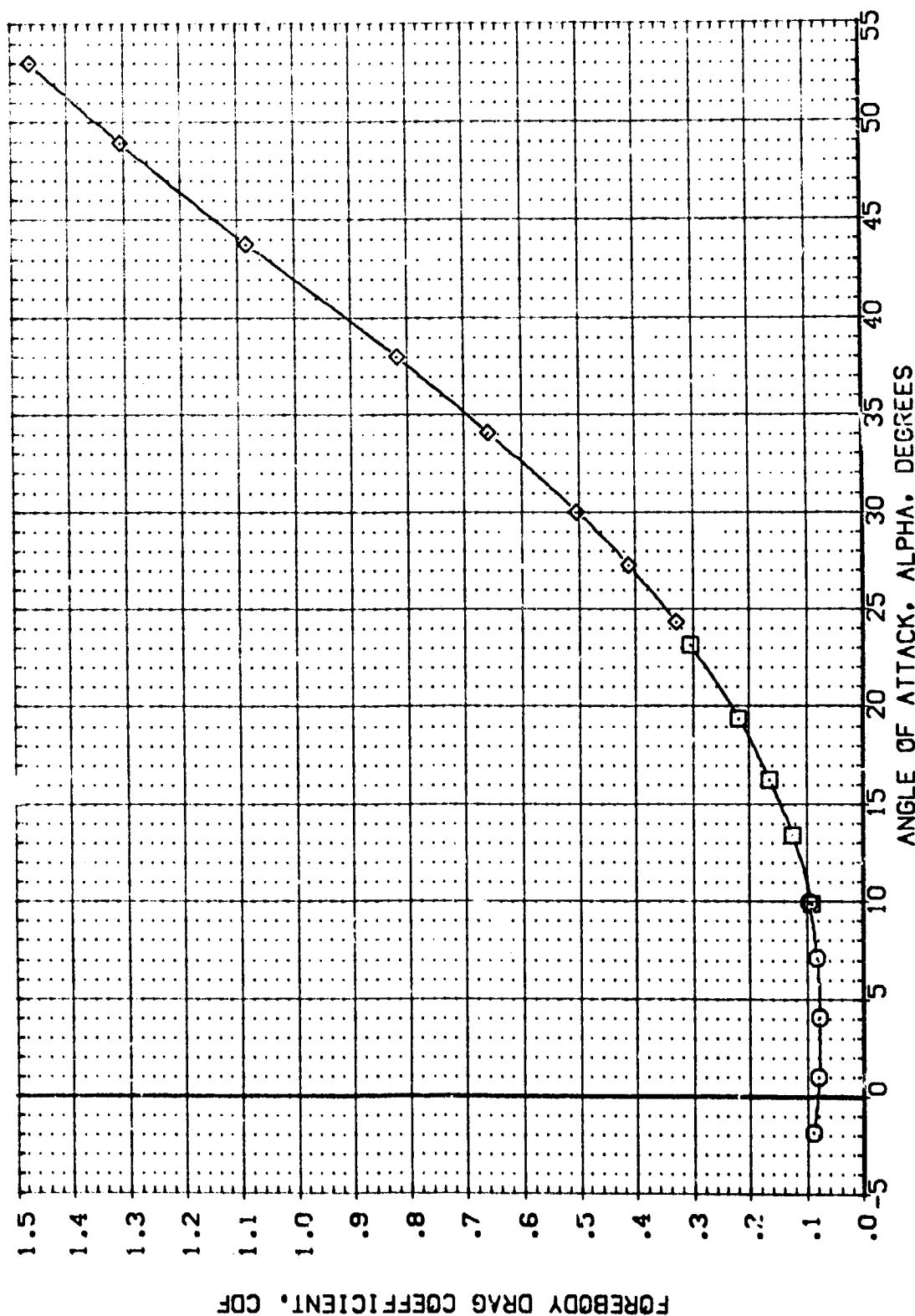


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BDFLAP	REFERENCE INFORMATION
(BBX007)	AVES 3.5-160 CA11B (B10F4C507N3-B) (V87E18) (V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000 SO.FT. IN.
(BBX008)	AVES 3.5-160 CA11B (B10F4C507N3-B) (V87E18) (V5R5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX052)	AVES 3.5-160 CA11B (B10F4C507N3-B) (V87E18) (V5R5)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

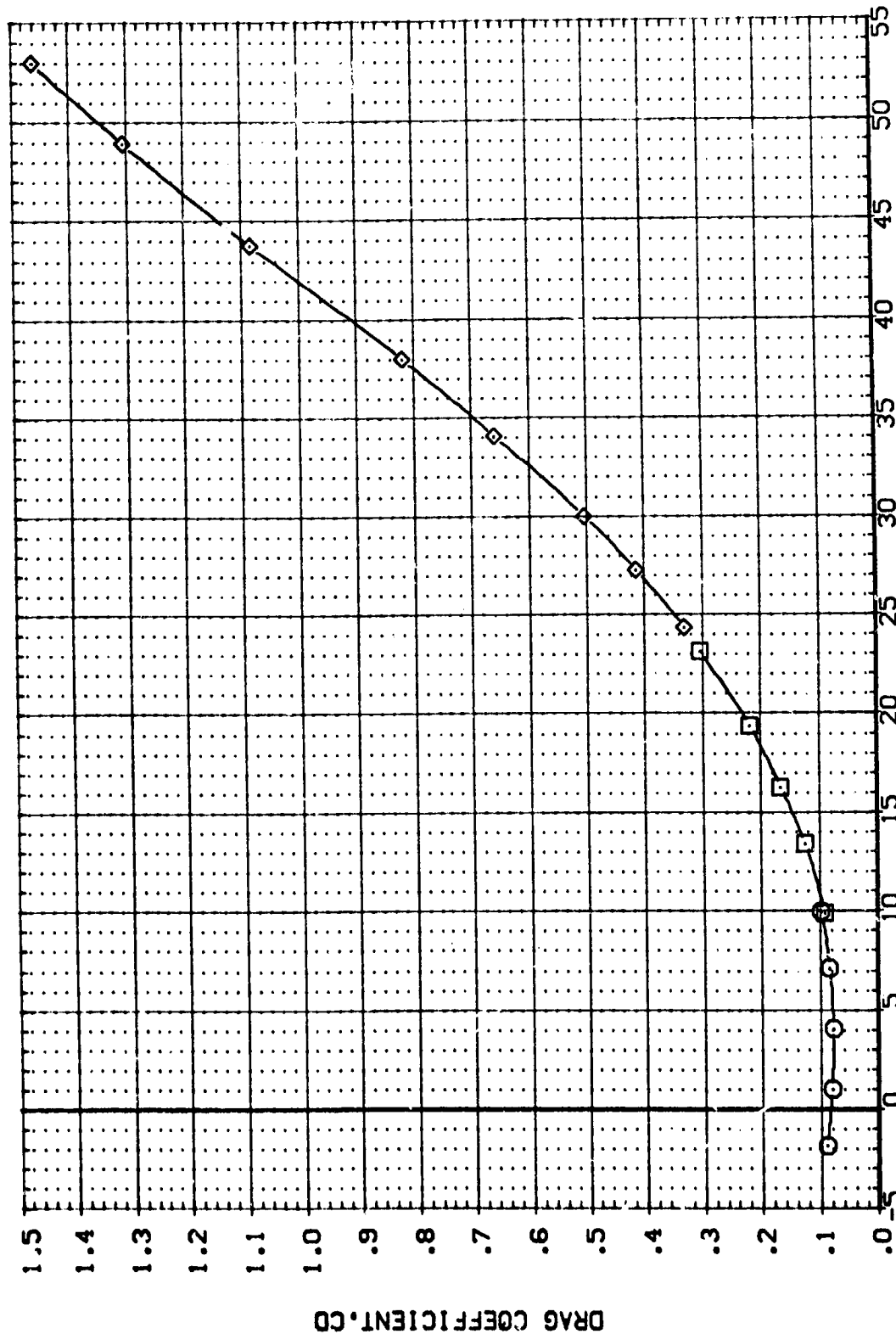


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL: (BBX007) (BBX008) (BBX052)

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 CA11B (B10F4C507H3-8) (W87E18) (VSRS)
 AYES 3.5-160 CA11B (B10F4C507H3-8) (W87E18) (VSRS)
 AYES 3.5-160 CA11B (B10F4C507H3-8) (W87E18) (VSRS)

ELEVON RUDDER SPOBRK BOFLAP
 .000 .000 .000 .000
 .000 .000 .000 .000
 .000 .000 .000 .000

REFERENCE INFORMATION
 SREF 1590.0000 50.FT.
 LREF 174.5100 IN.
 BREF 326.5000 IN.
 XMRP 1076.4000 IN.
 YMRP 1000 IN.
 ZMRP 40 IN.
 SCALE 0.150

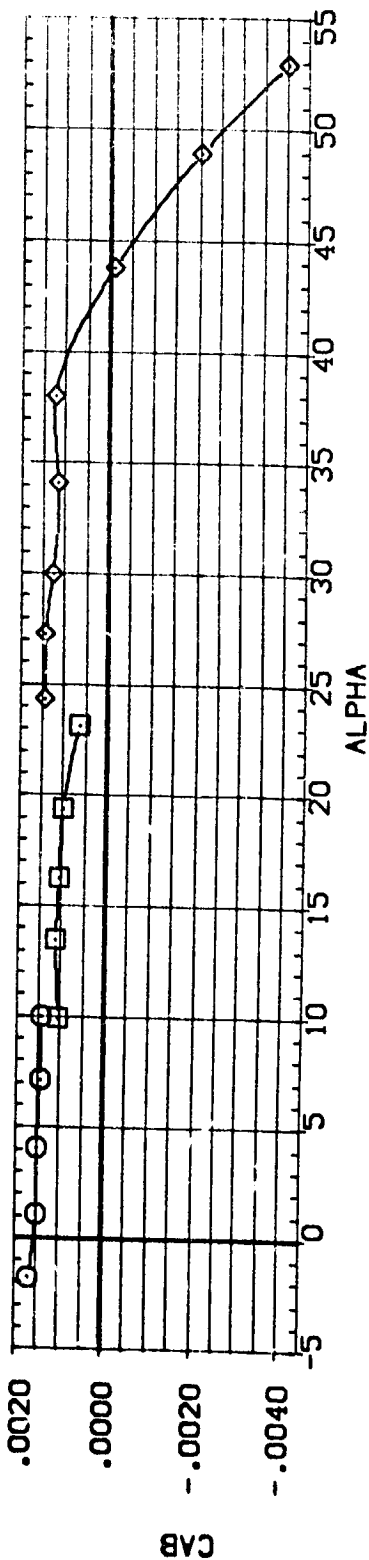
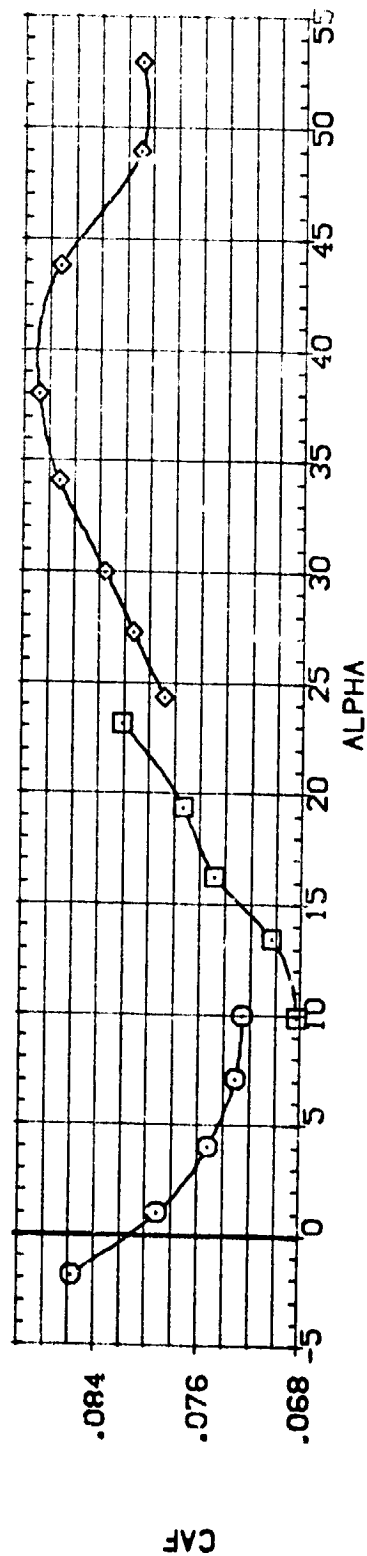
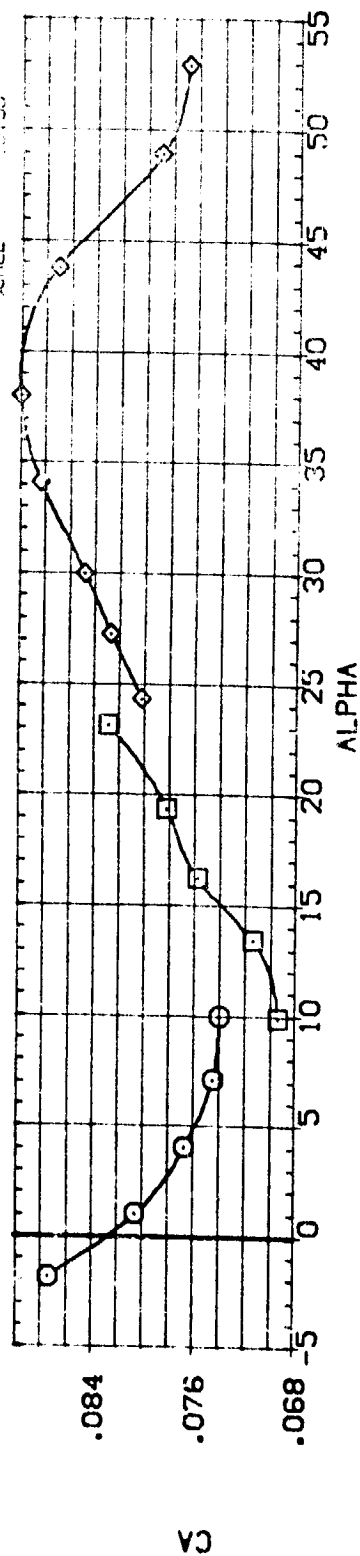


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BD FLAP	REFERENCE INFORMATION
(BBX007)	ANES 3.5-160 DA11B (B10-4CS07GNB)(V87E18)(V59S)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX008)	ANES 3.5-160 DA11B (B10-4CS07GNB)(V87E18)(V59S)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX052)	ANES 3.5-160 DA11B (B10-4CS07GNB)(V87E18)(V59S)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

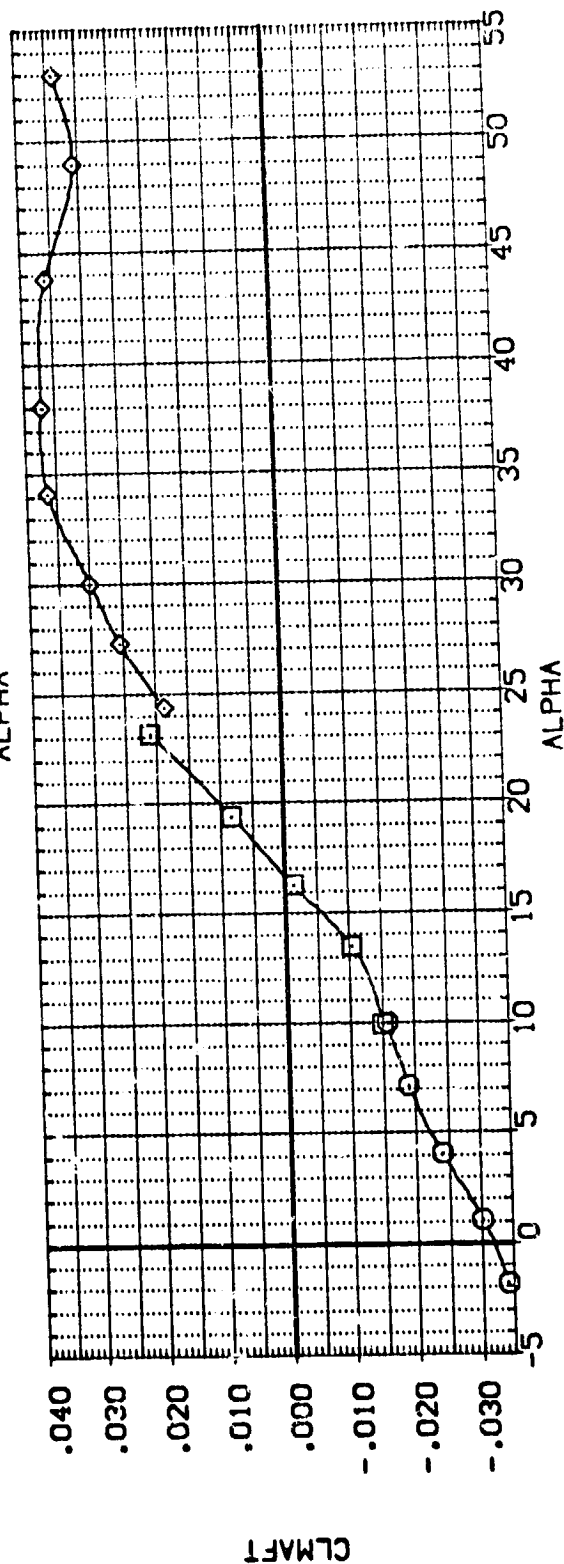
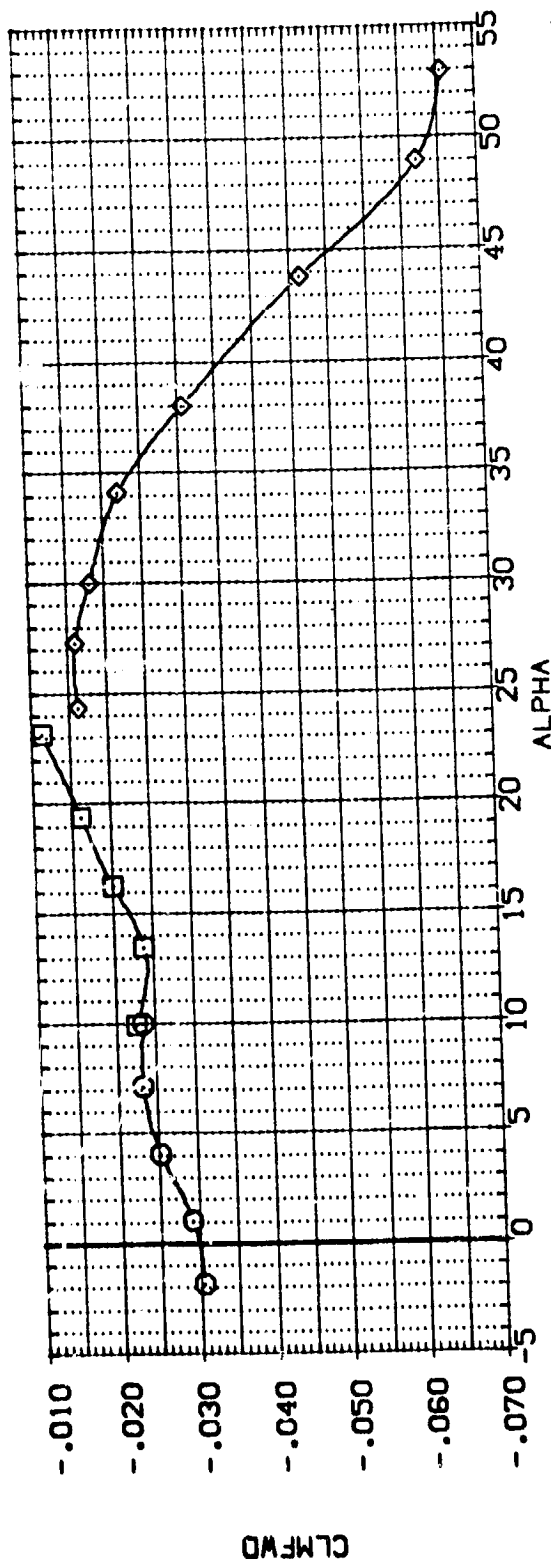


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A) MACH = 7.32

C-4

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BO-LAP	REFERENCE INFORMATION
(BBX007)	AMES 3.5-160 CA118 (S10F4C507K348)(V87E18)(V595)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX008)	AMES 3.5-160 CA118 (S10F4C507K348)(V87E18)(V595)	.000	.000	54.920	-14.250	REF 474.8100 IN.
(BBX052)	AMES 3.5-160 CA118 (S10F4C507K348)(V87E18)(V595)	.000	.000	54.920	-14.250	REF 936.6800 IN.
						REF 1076.4500 IN.
						REF 400.0000 IN.
						REF 400.0000 IN.
						SCALE .0150

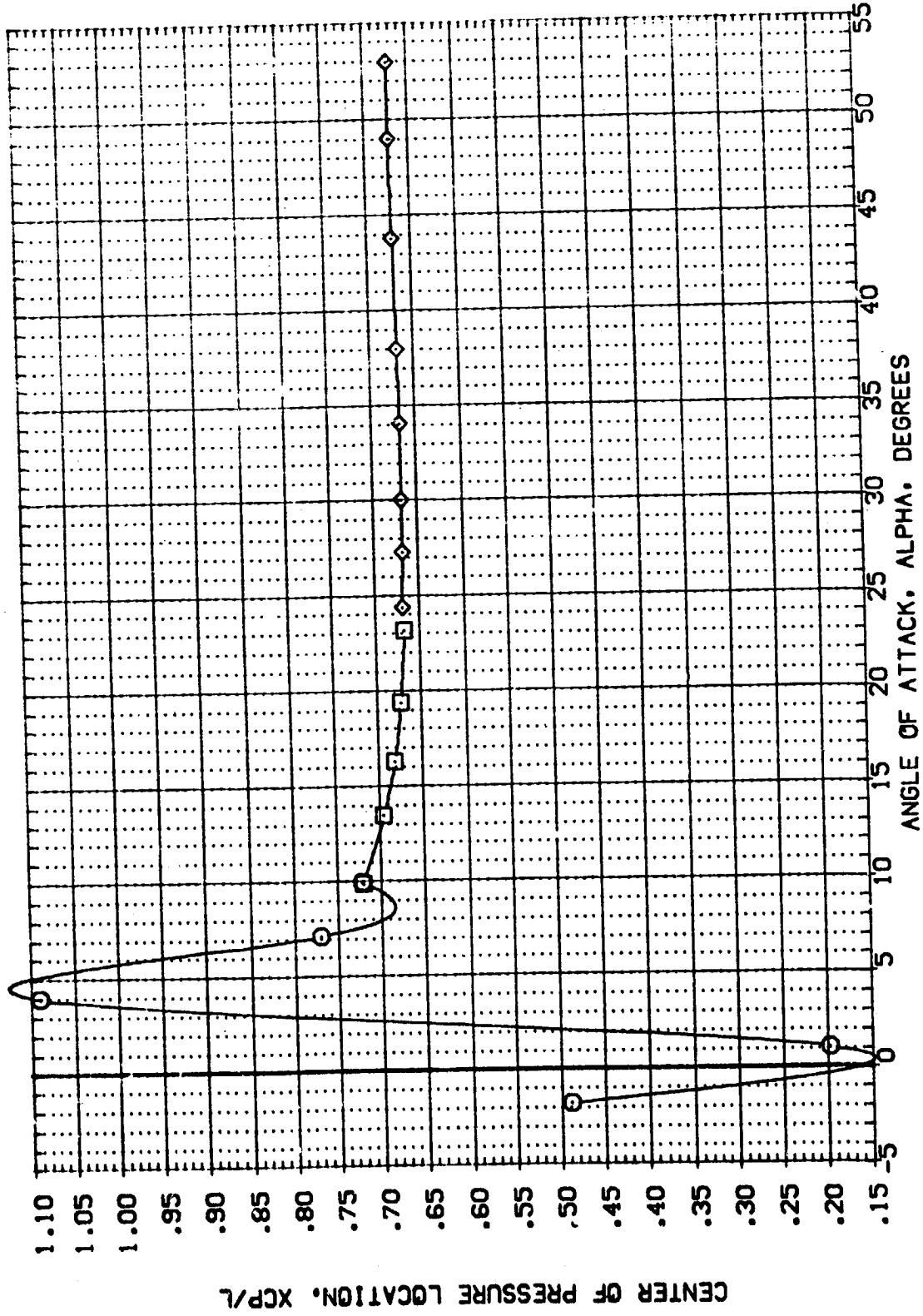


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BBX007)	AVES 3.5-160 CA11B (B10F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(BBX008)	AVES 3.5-160 CA11B (B10F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(BBX052)	AVES 3.5-160 CA11B (B10F4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XREF 1076.4800 IN.
						YREF .0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

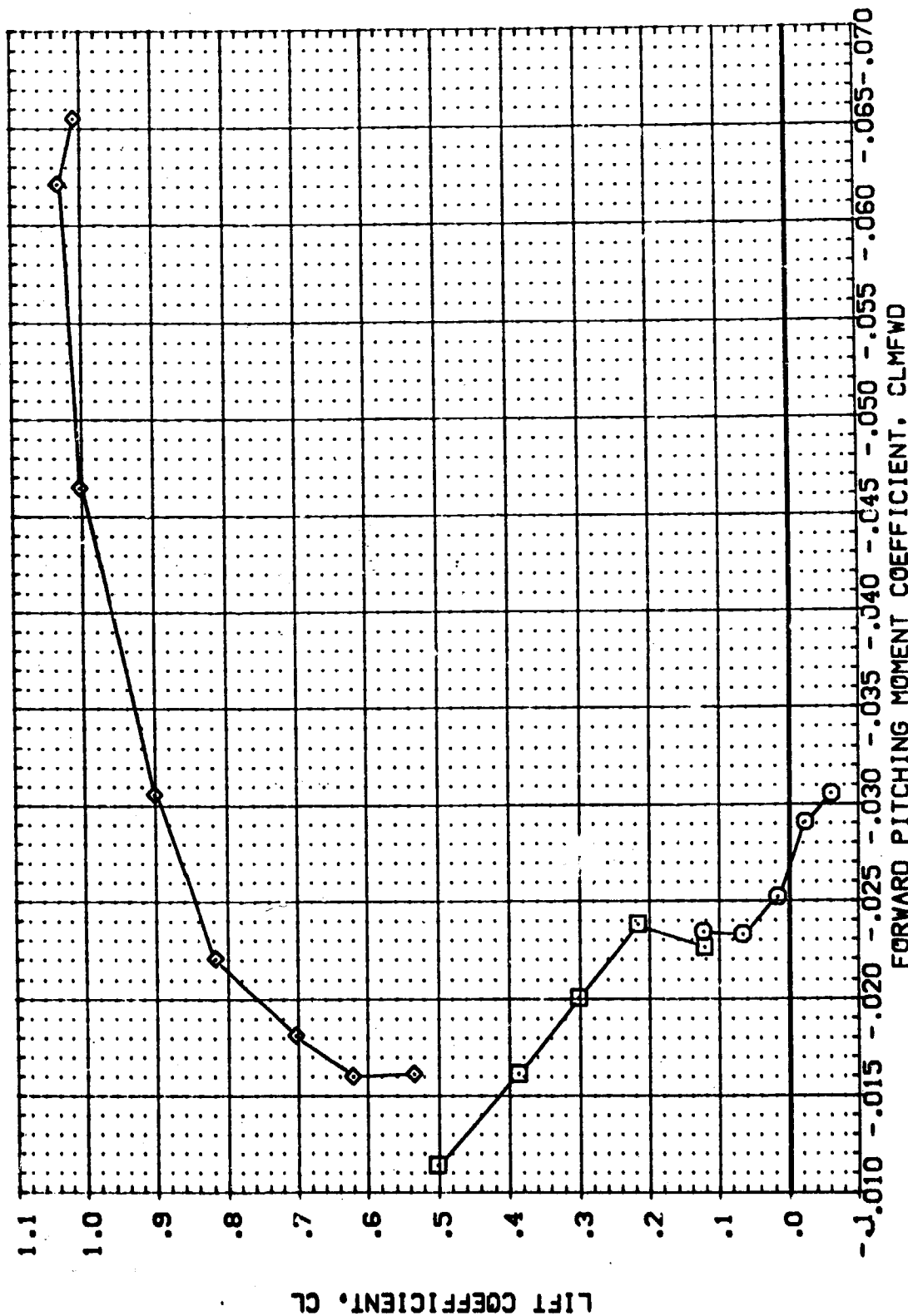


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL

(BBX007)
(BBX008)
(BBX052)

CONFIGURATION DESCRIPTION

AVES 3.5-160 0A118 (810F4C507G38)(V87E18)(V5R5)
AVES 3.5-160 0A118 (810F4C507G38)(V87E18)(V5R5)
AVES 3.5-160 0A118 (810F4C507G38)(V87E18)(V5R5)

ELEVON .000
RUDDER .000
SPDBRK 54.920
BOFLAP -14.250

REFERENCE INFORMATION
SREF 2690.0000 50. FT.
LREF 474.8100 IN.
BREF 936.6300 IN.
XMRP 1076.4800 IN.
YMRP 0.000 IN.
ZMRP 400.0000 IN.
SCALE 0.150

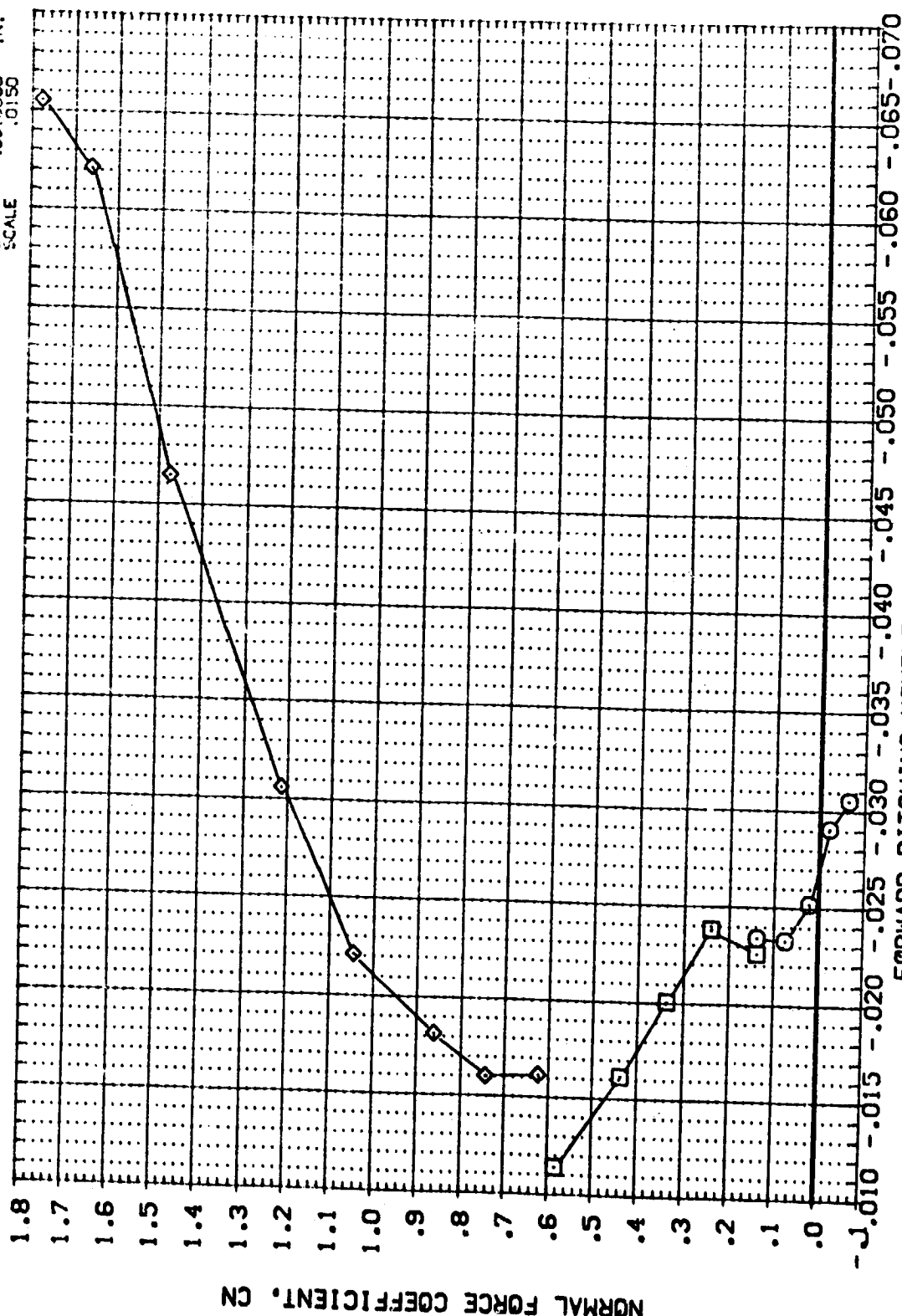


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPDBRY		BOFLAP		REFERENCE INFORMATION	
(BBK007)	Q	AMES 3.5-160	QAI1B (B1DF4C507G3N8)(V87E18)(V5R5)	.000	.000	.000	.000	54.920	-14.250	SREF	2690.0000	50.FT.	
(BBK008)	Q	AMES 3.5-160	QAI1B (B1DF4C507G3N8)(V87E18)(V5R5)	.000	.000	.000	.000	54.920	-14.250	LREF	474.8100	IN.	
(BBK052)	Q	AMES 3.5-160	QAI1B (B1DF4C507G3N8)(V87E18)(V5R5)	.000	.000	.000	.000	54.920	-14.250	BREF	936.6800	IN.	
										XMRP	1076.4800	IN.	
										YMRP	.0000	IN.	
										ZMRP	400.0000	IN.	
										SCALE	.0150		

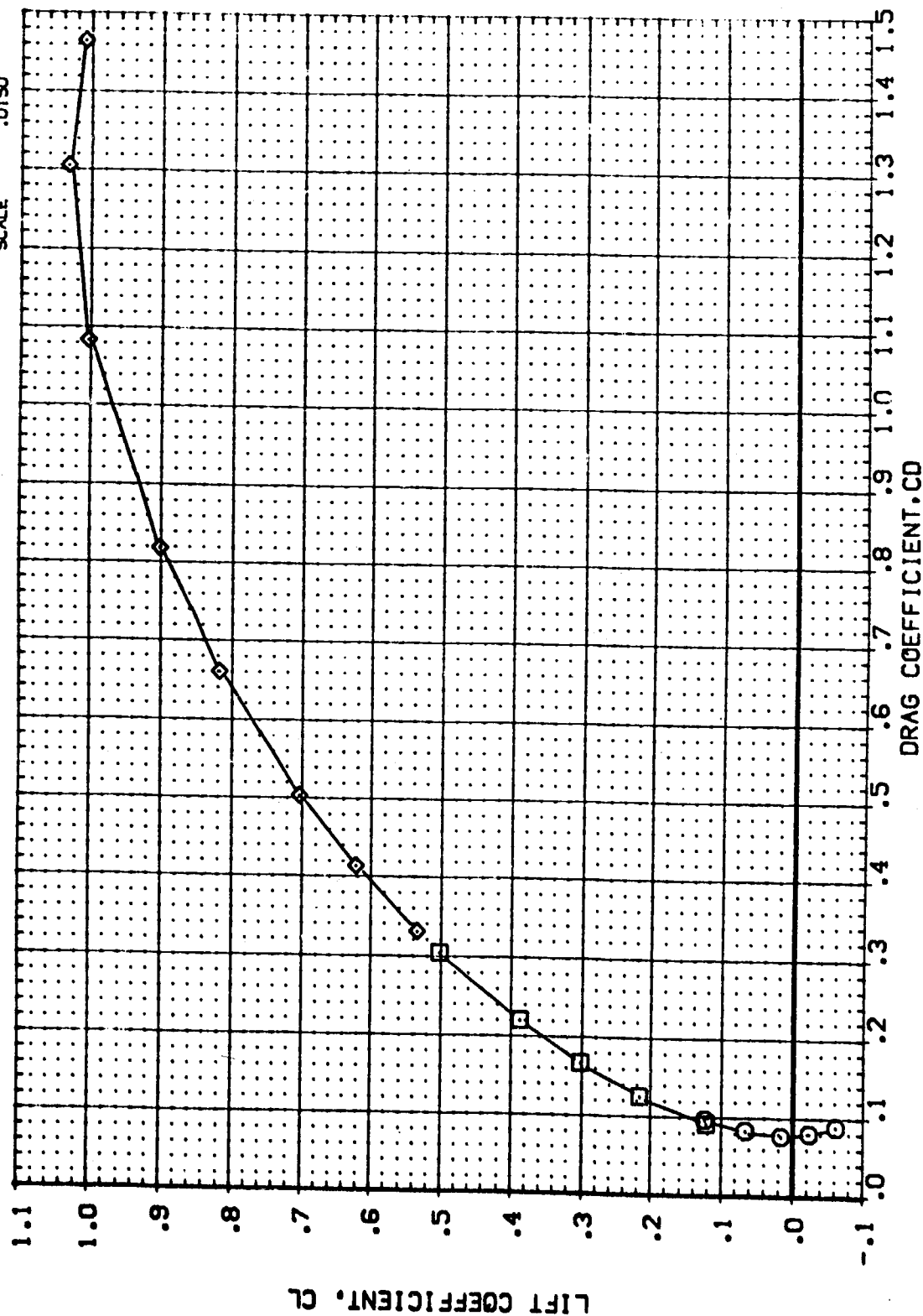


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRBK	BOFLAP	REFERENCE INFORMATION
(ABX007)	AVES 3.5-160 OA11B (810°4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(ABX008)	AVES 3.5-160 OA11B (810°4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
(ABX052)	AVES 3.5-160 OA11B (810°4C507M3-8)(V87E18)(V5RS)	.000	.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

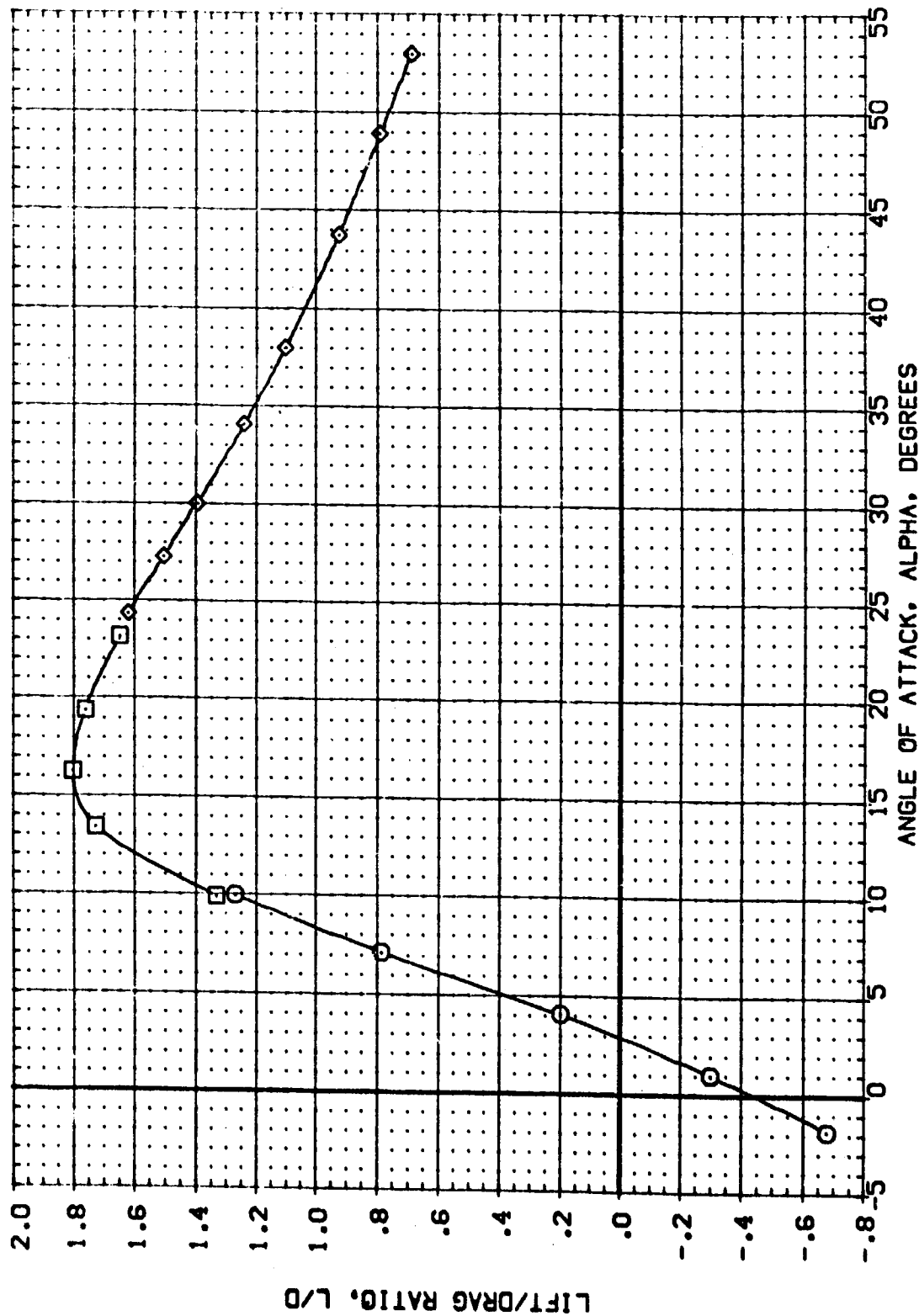


FIG. 4.A.2 MACH 7.32 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPORCK		BODY LAP		REFERENCE INFORMATION	
(BB0043)	B	AMES 3.5-160	DA118 (B10F4C507G-N8)	(V87E18)	(V87E18)	.000	.000	54.920	-14.250	SREF	2690.0000	50. FT.	
(BB0036)	B	AMES 3.5-160	DA118 (B10F4C507G-N8)	(V87E18)	(V87E18)	.000	.000	54.920	-14.250	LREF	474.8100	IN.	
										BREF	936.6800	IN.	
										XMRP	1076.4800	IN.	
										YMRP	.0000	IN.	
										ZMRP	400.0000	IN.	
										SCALE	.0150		

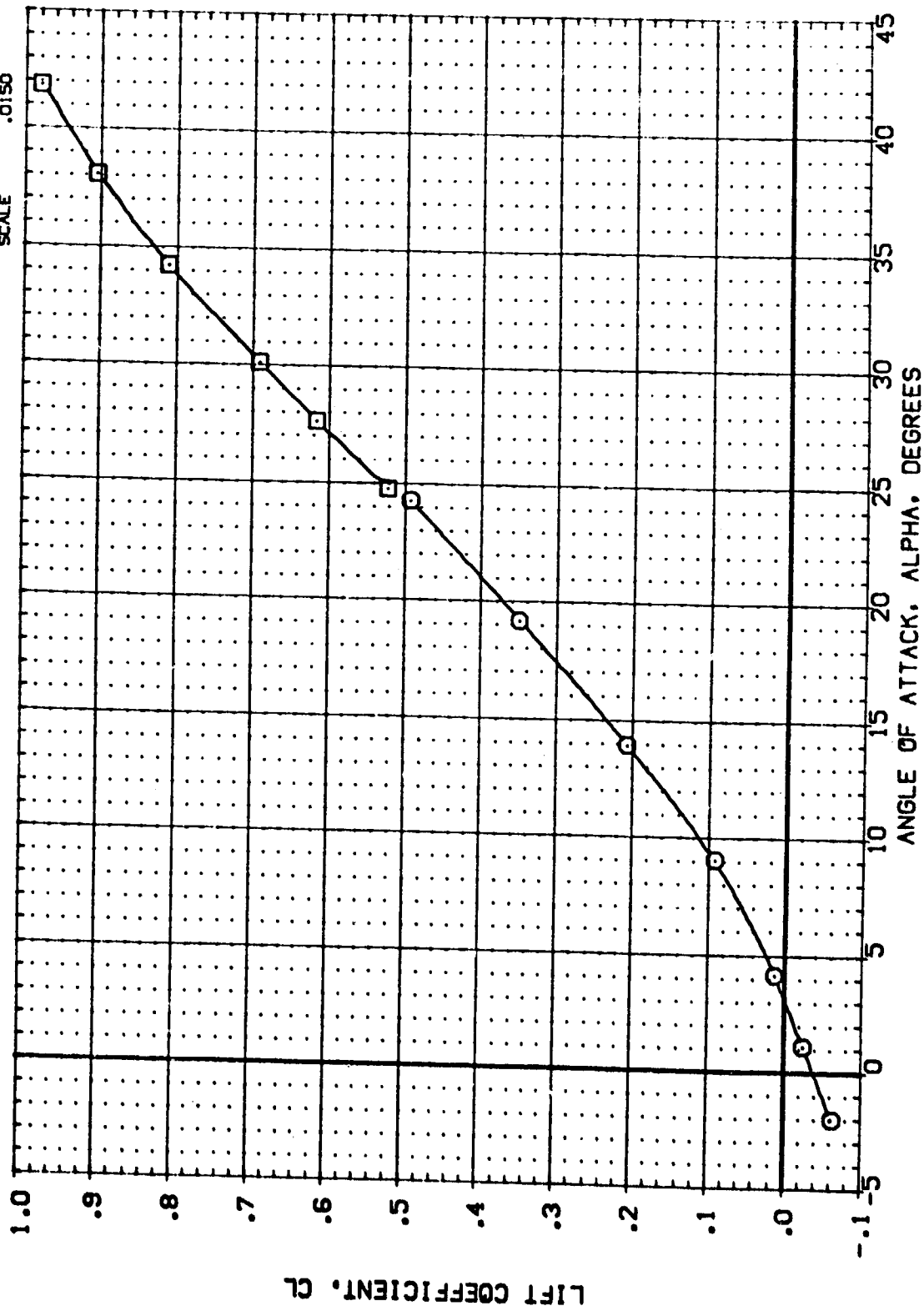


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

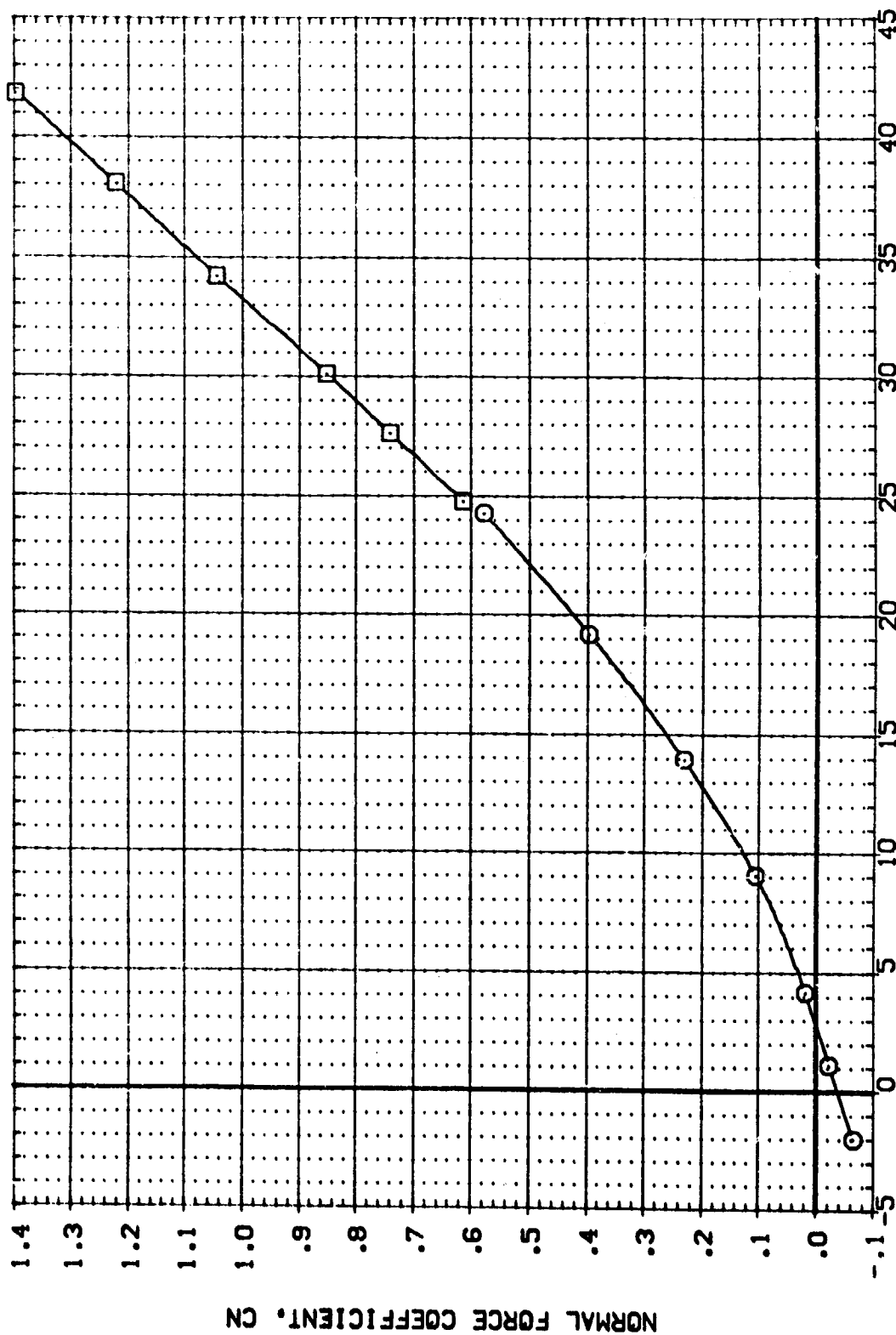
(A)MACH = 10.29

DATA SET SYMBOL: (880043) (880036)

CONFIGURATION DESCRIPTION: ASES 3.5-160 CA11B (810F4C507G4B)(V87E18)(V5R5) ASES 3.5-160 CA11B (810F4C507G4B)(V87E18)(V5R5)

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 -14.250 BOFLAP: 54.920 -14.250

REFERENCE INFORMATION: SREF: 2690.0000 SC.FT. LREF: 474.8100 IN. XMRP: 936.6800 IN. YMRP: 1076.4800 IN. ZMRP: .0000 IN. SCALE: 400.0000 IN. .0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BB0043)	AVES 3.5-160 DAI1B (810F4C507H3-8)(V87E18)(V59S)	.000	.000	S4.520	-14.250	SREF 2690.0000 SQ.FT.
(BB0036)	AVES 3.5-160 DAI1B (810F4C507H3-8)(V87E18)(V59S)	.000	.000	S4.520	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XPRP 1076.4800 IN.
						YPRP .0000 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

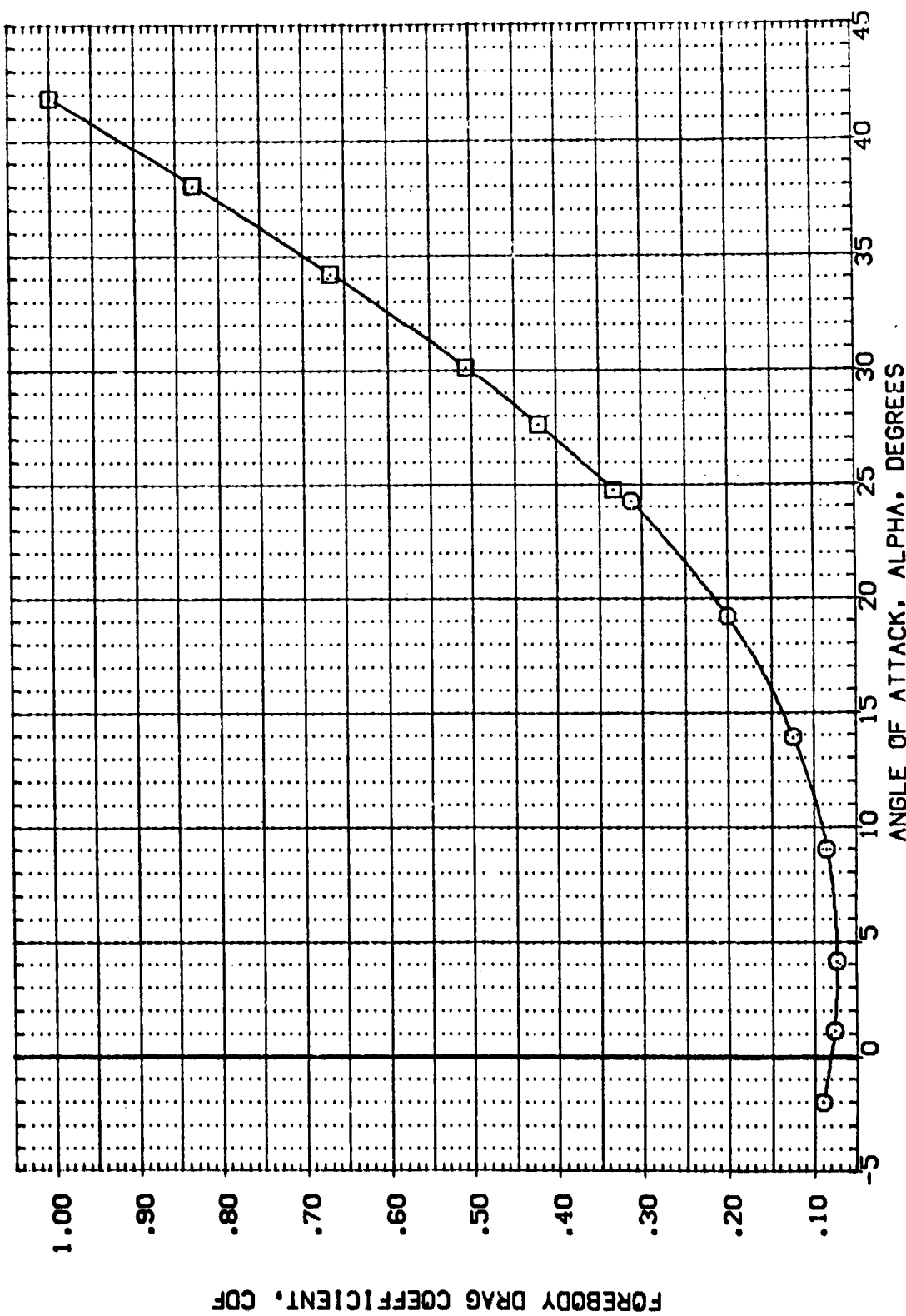


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX043)	AVES 3.5-160 0A11B (B10F4C507H3-8)(V87E18)(V59S)	.000	.000	54.520	-14.250	SREF 2690.0000 SQ.FT.
(BBX036)	AVES 3.5-160 0A11B (B10F4C507H3-8)(V87E18)(V59S)	.000	.000	54.520	-14.250	LREF 474.8100
						BREF 936.6800
						XMRP 1076.1600
						YMRP .0000
						ZMRP 400.0000
						SCALE .0150

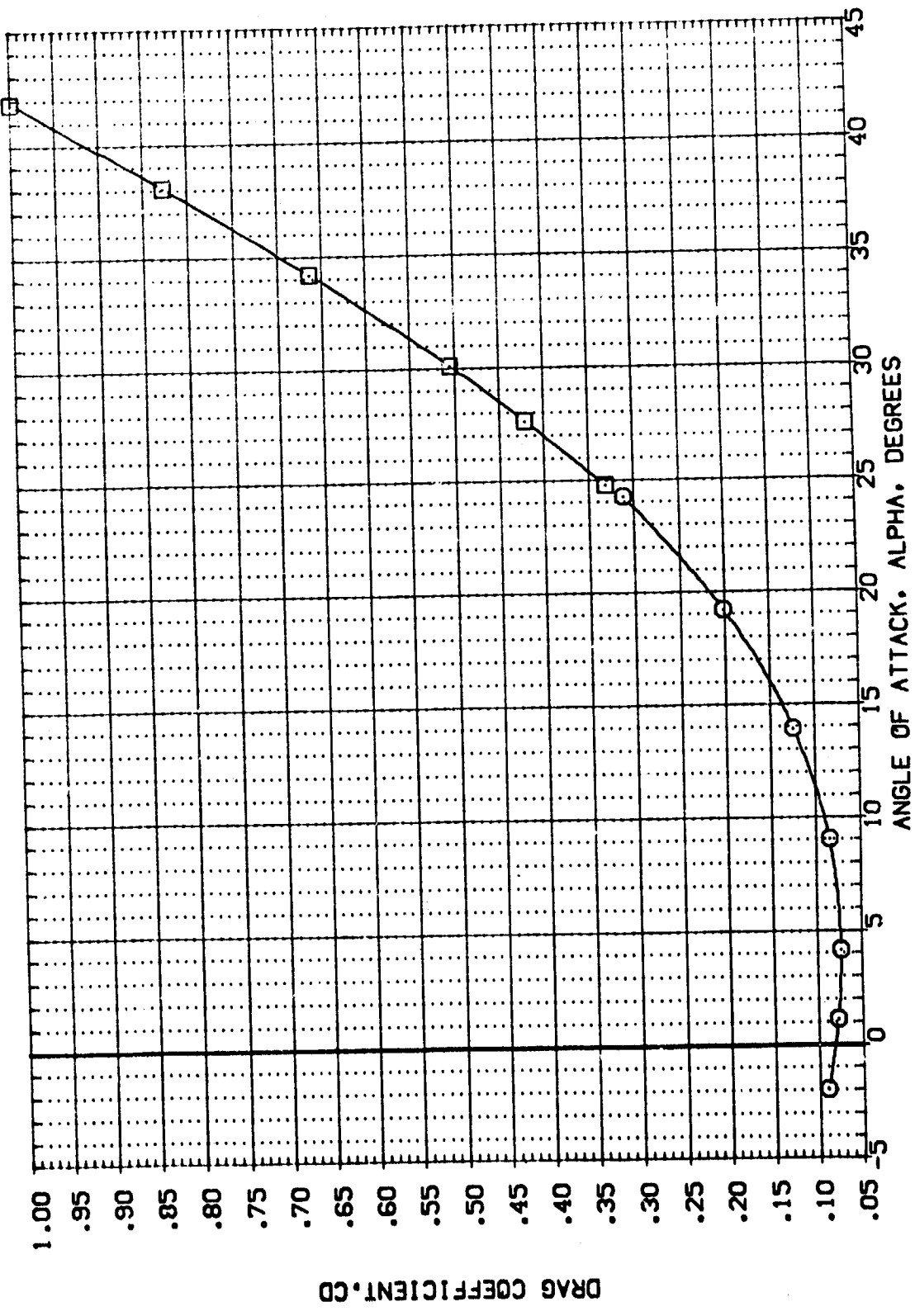


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL (BBX043) (BBX036) CONFIGURATION DESCRIPTION
 AVES 3.5-160 DA11B (B10F4C507M3B)(V87E18)(V59S)
 AVES 3.5-160 DA11B (B10F4C507M3B)(V87E18)(V59S)

ELEVON RUDDER SPDBRK BOFLAP
 .000 .000 54.920 -14.250
 .000 .000 54.920 -14.250

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4870 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

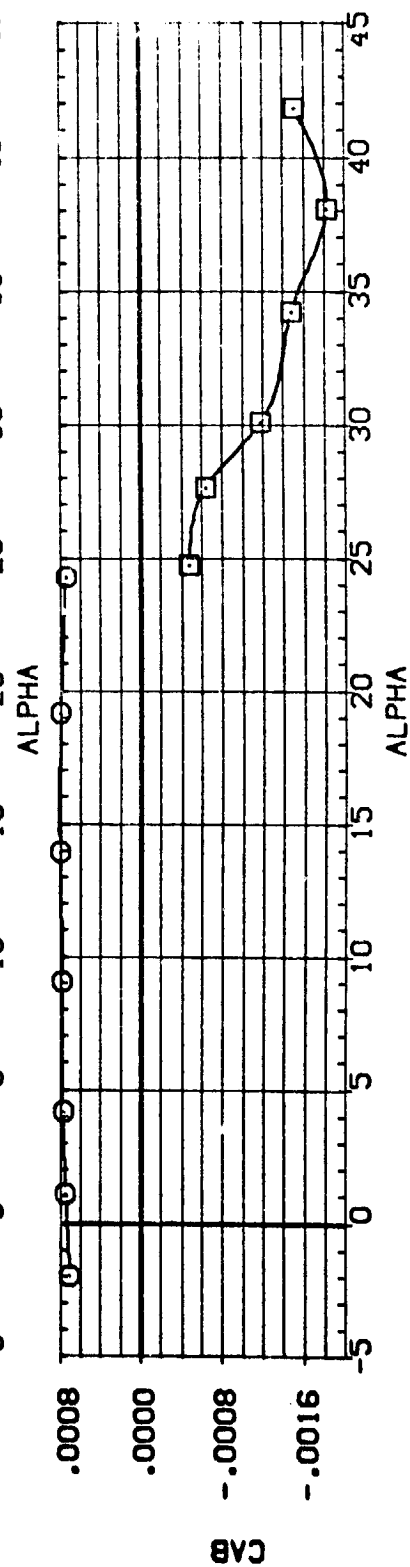
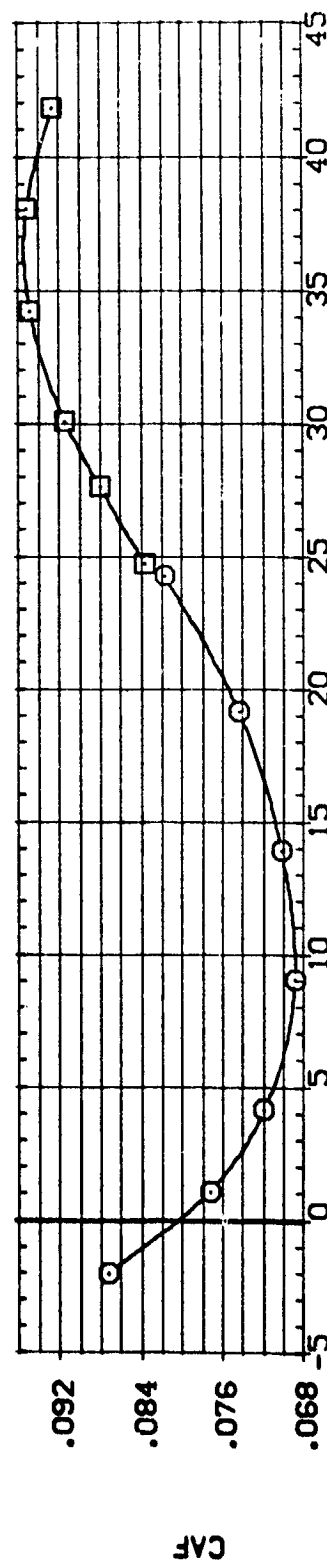
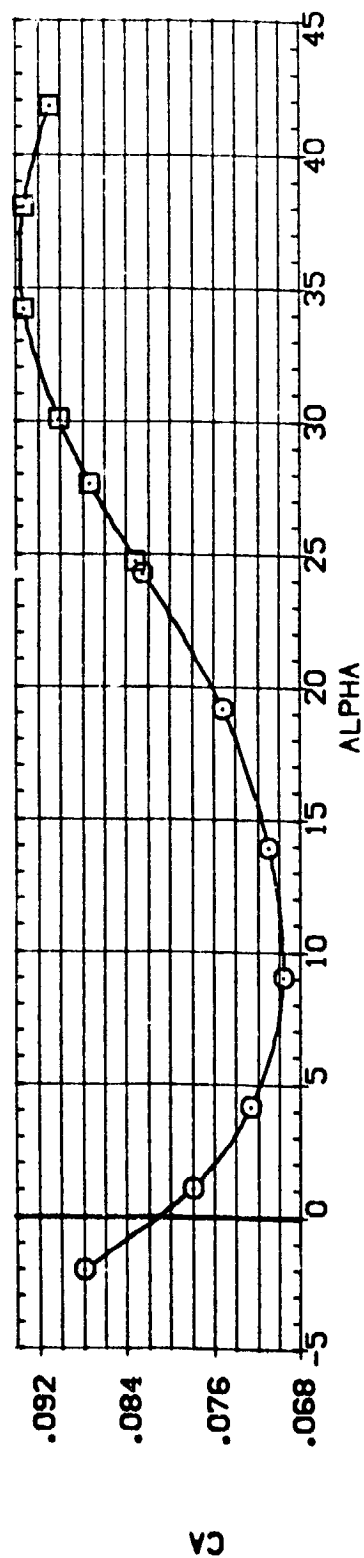


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS
 (A)MACH = 10.29

DATA SET SYMBOL (BBX043) (BBX036)

CONFIGURATION DESCRIPTION
 ASES 3.5-160 0A118 (B10F4C507H3G48)(V87E18)(V5RS)
 ASES 3.5-160 0A118 (B10F4C507H3G48)(V87E18)(V5RS)

ELEVON RUDDER SPOILER BOFLAP

REFERENCE INFORMATION
 SREF 2693.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 0.0000 IN.
 SCALE .0150

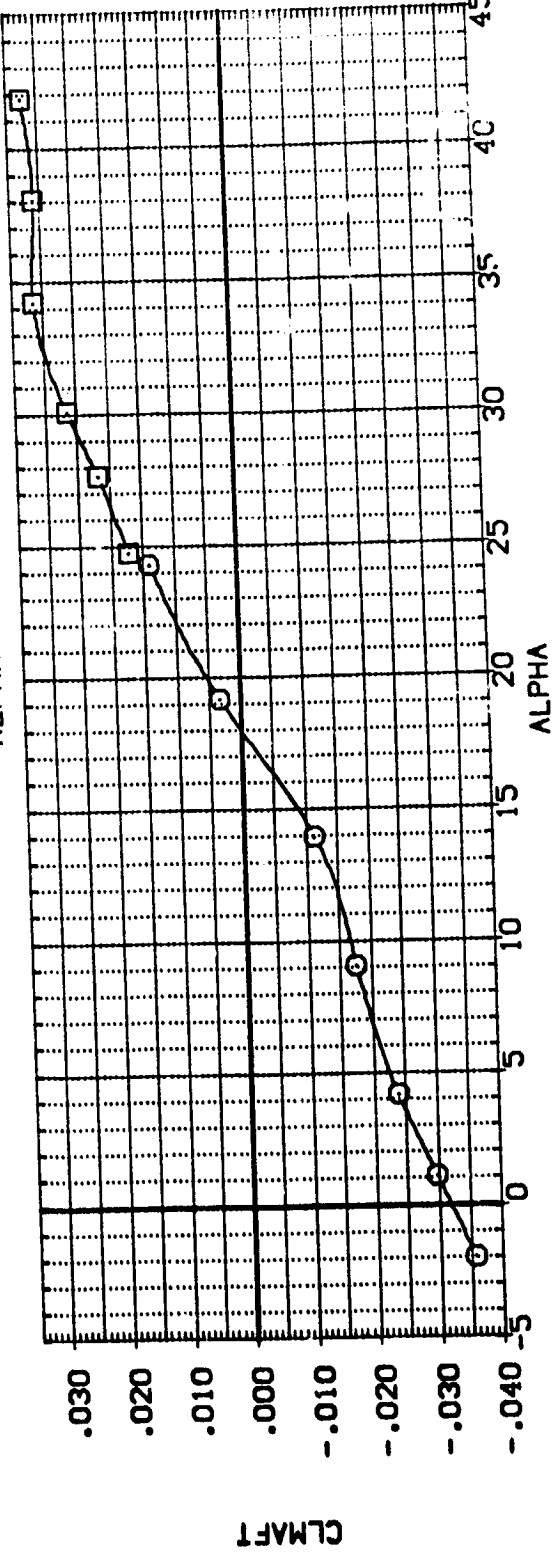
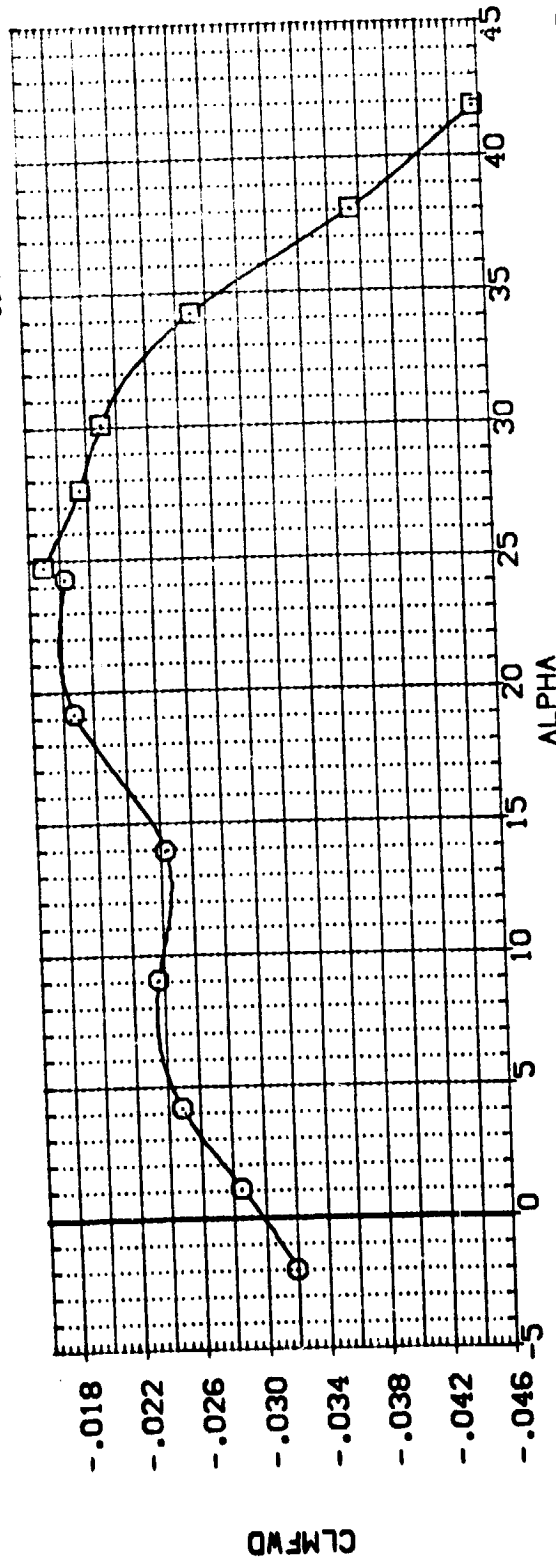


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL: (BB0043) (BB0036)

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V5R5)
 AYES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V5R5)

ELEVON: .000
 RUDDER: .000
 SP08RK: 54.920
 BDFLAP: -14.250

REFERENCE INFORMATION:
 SREF: 2690.0000 50. FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

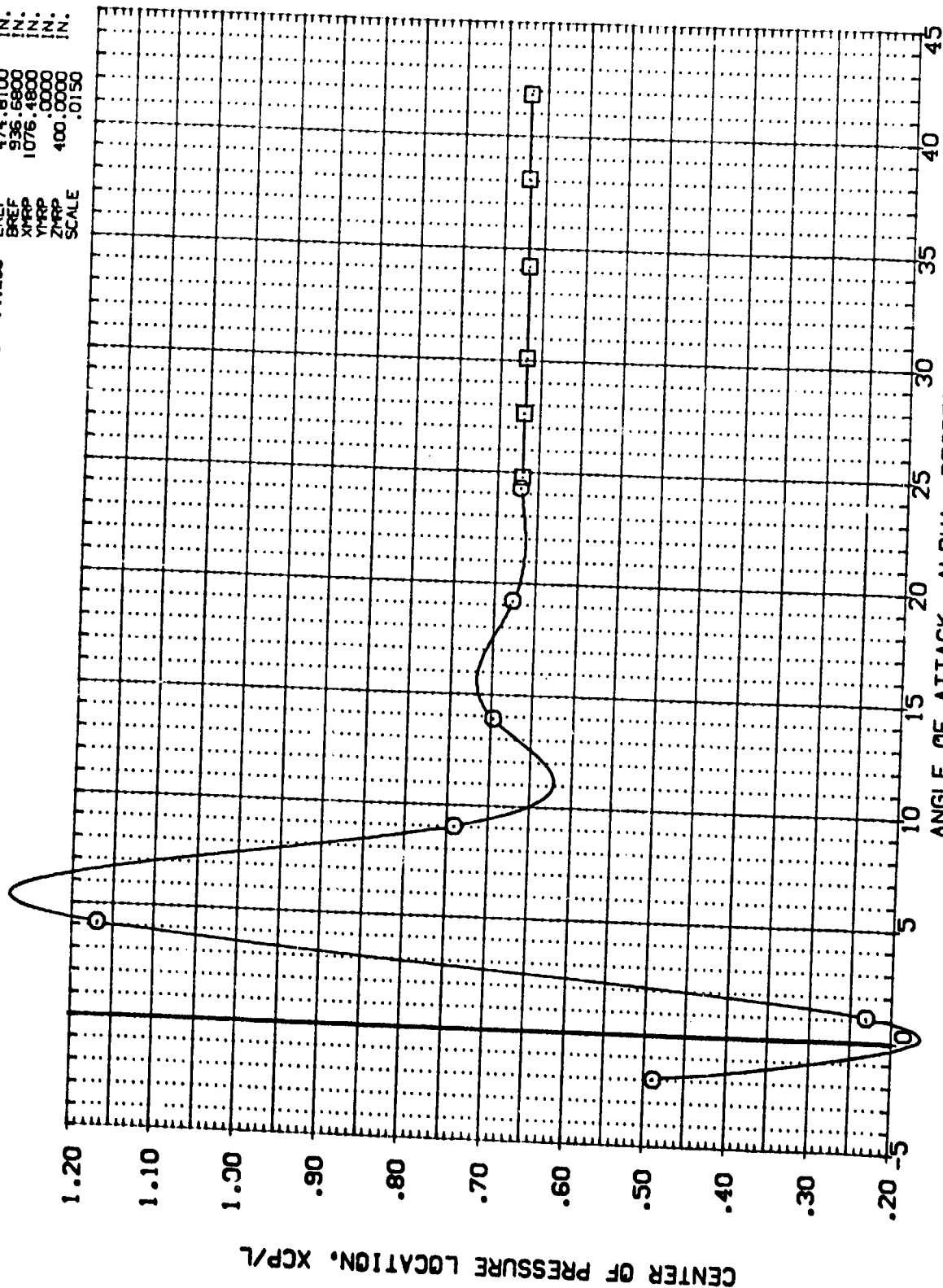
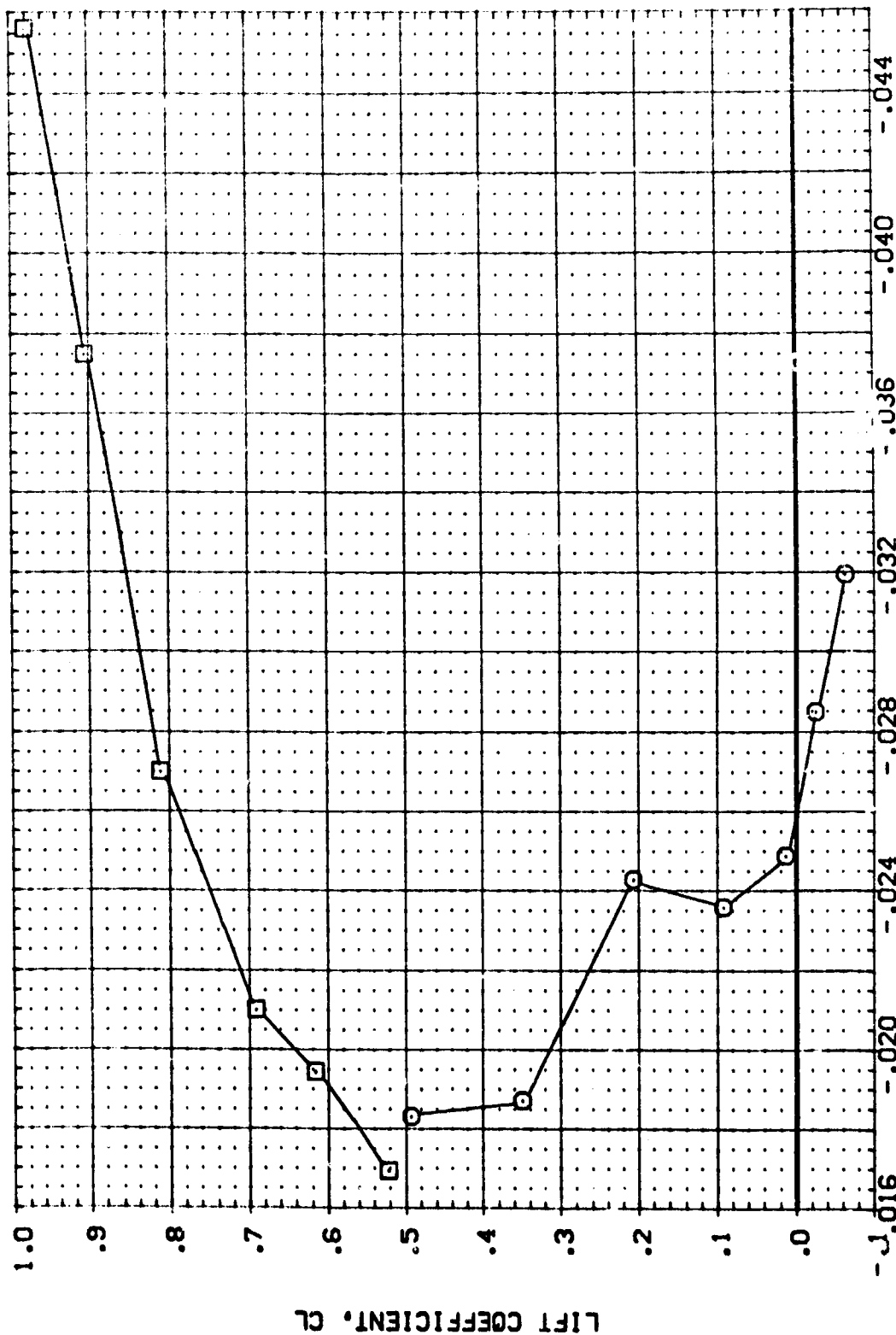


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS
 (A) MACH = 10.29

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BB0043)	APES 3.5-160 DA11B (B10F4C507G4B)(V87E18)(V5K5)	.000	.000	54.920	-14.250	SREF 2890.0000 SQ.FT.
(BB0036)	APES 3.5-160 DA11B (B10F4C507G4B)(V87E18)(V5K5)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMPP 1076.4800 IN.
						YMPP .0000 IN.
						ZMPP 400.0000 IN.
						SCALE .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLM/F

FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL: (BBX043) (BBX036)

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 DAI1B (BIDF4C507G3-8)(V87E18)(V88S)
 AYES 3.5-160 DAI1B (BIDF4C507G3-8)(V87E18)(V88S)

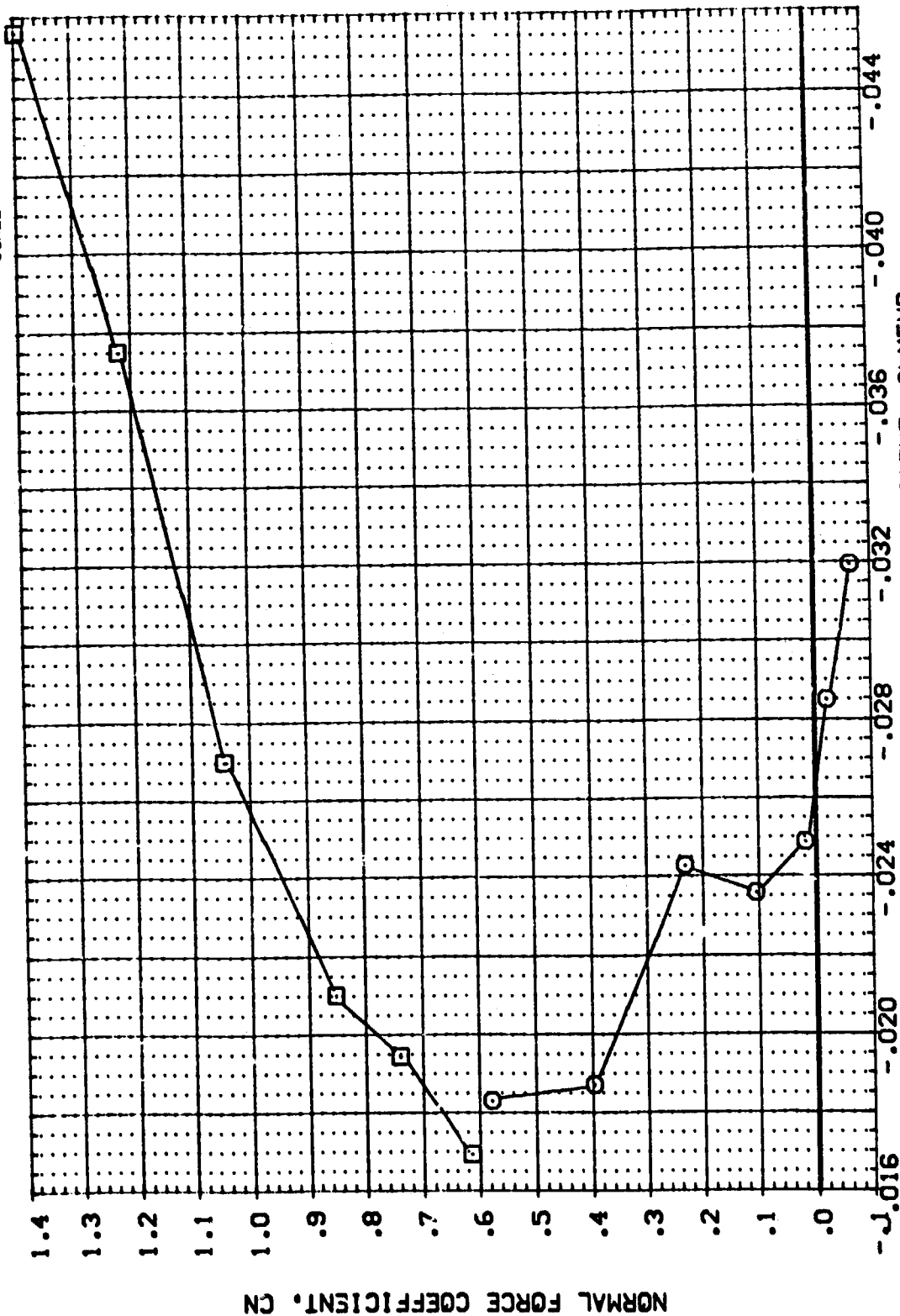
ELEVON: .000

RUDER: .000

SPORK: 54.920

BOFLAP: -14.250

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6900 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL
(BB043)
(BB036)

CONFIGURATION DESCRIPTION

AVES 3.5-160 DA118 (B1D'4CS07G4G)(167E18)(V595)
AVES 3.5-160 DA118 (B1D'4CS07G4G)(167E18)(V595)

ELEVON RUDDER SPOILER BOFLAP
.000 .000 54.920 -14.250
.000 .000 54.920 -14.250

REFERENCE INFORMATION
SREF 2630.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

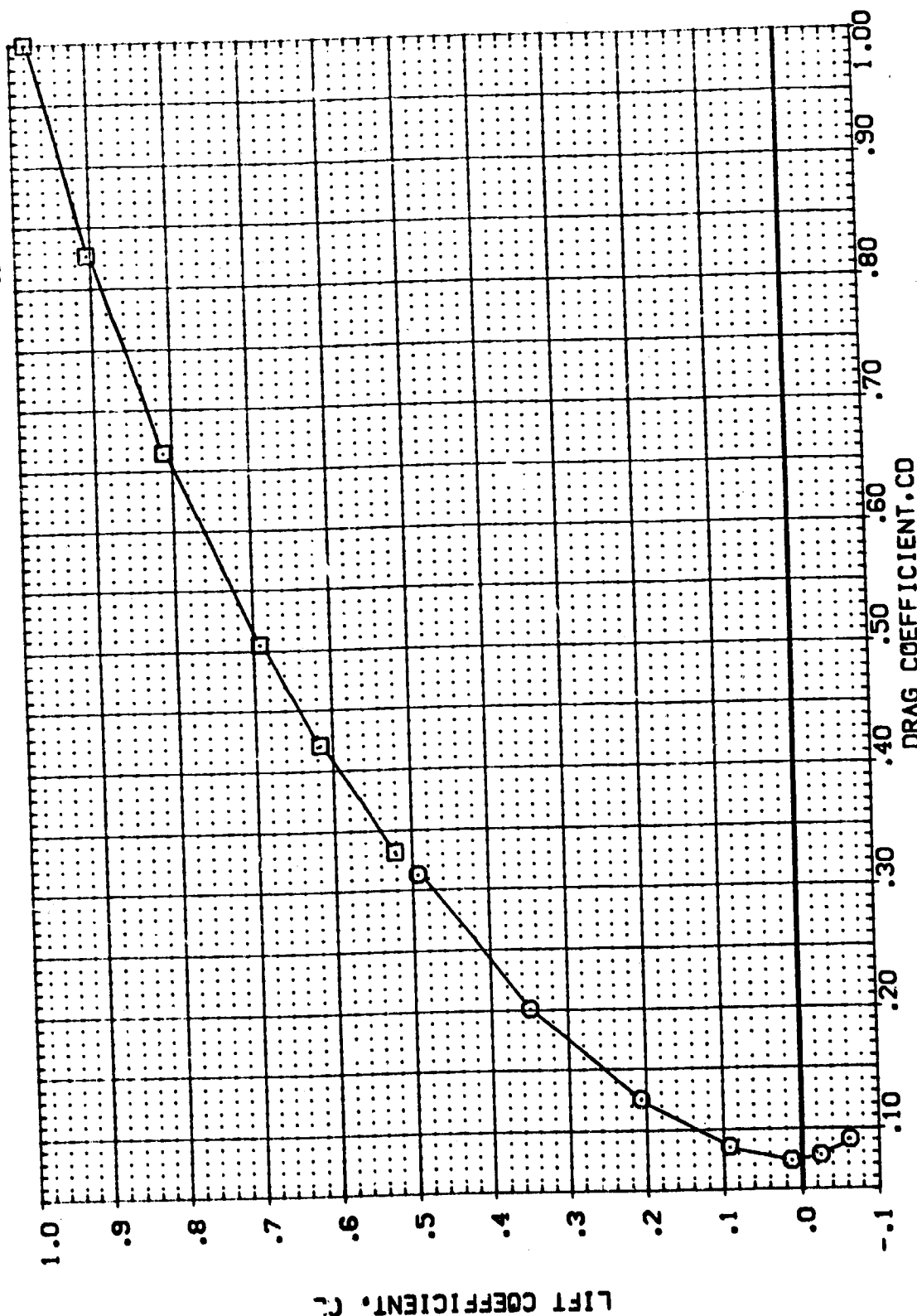


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(AB0043)	AVES 3.5-180 CA118 (810F4C507GN8)(V87E18)(V595)	.000	.000	54.920	-14.250	SREF 2650.0000 SO.FT. IN.
(AB0036)	AVES 3.5-180 CA118 (810F4C507GN8)(V87E18)(V595)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

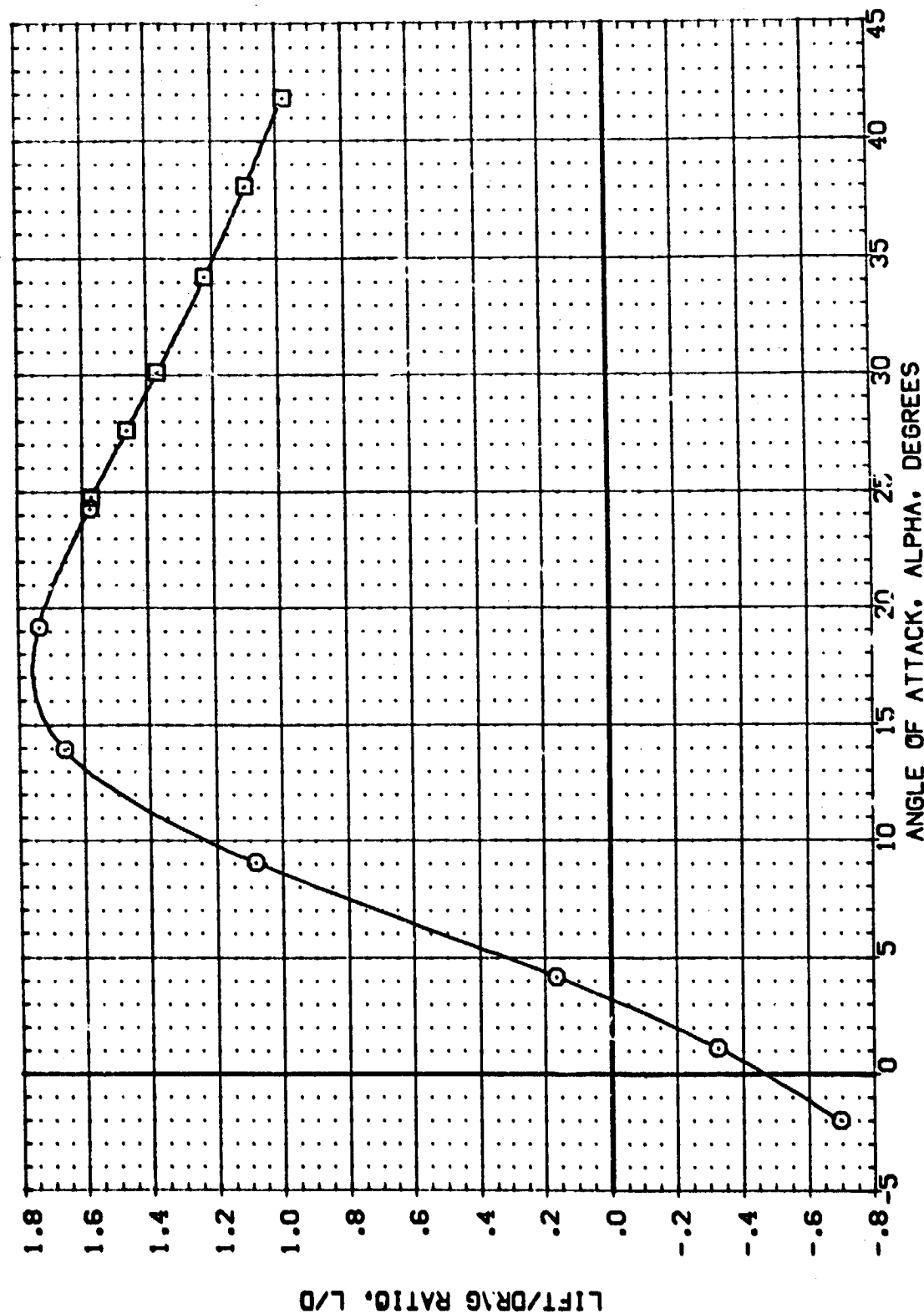
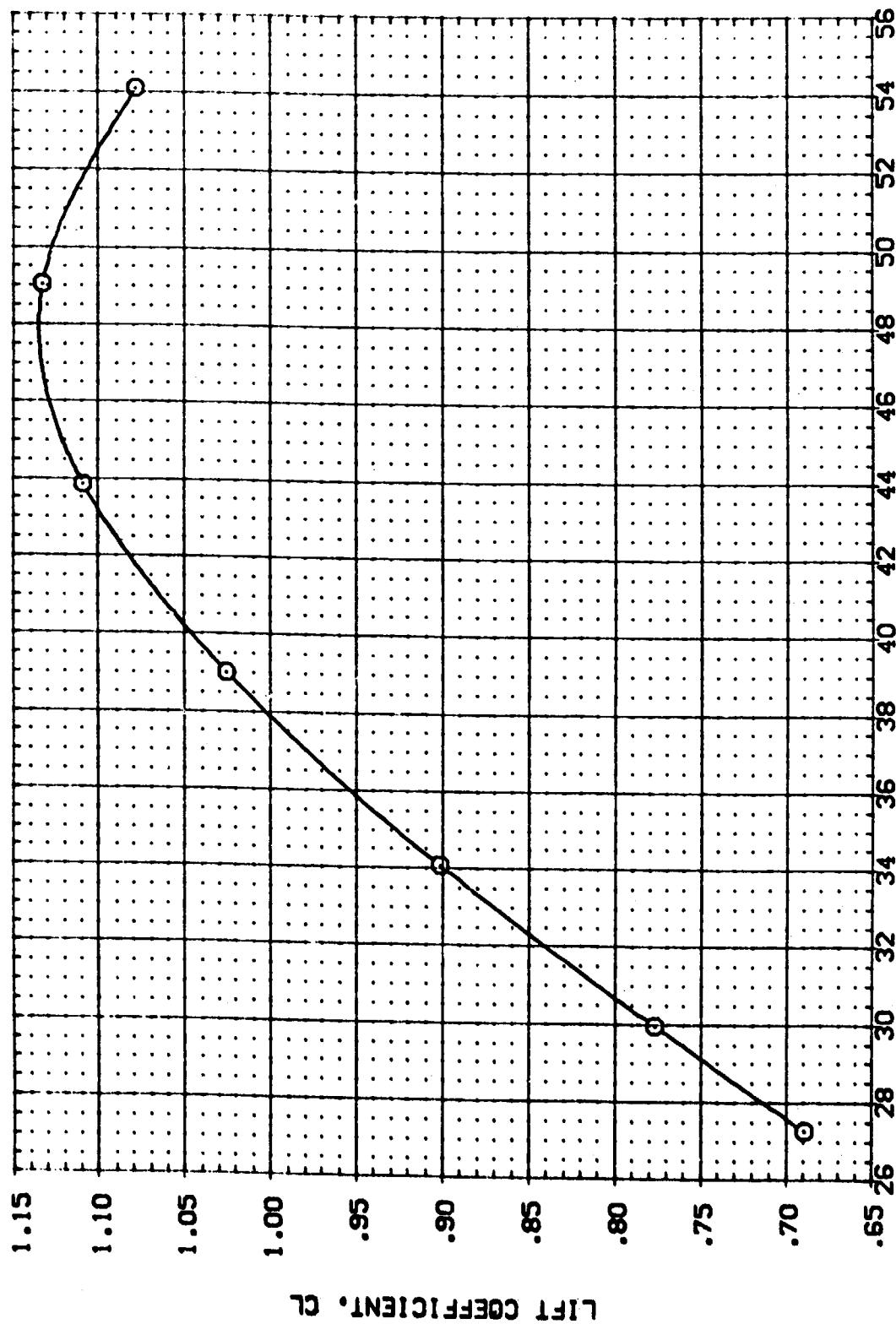


FIG. 4.A.3 MACH 10.29 -14.25 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL: (B80653) \bigcirc CONFIGURATION DESCRIPTION: AVES 3.5-160 CALIB (B10F4C507M3M)(V87E10)(V985)

ELEVON	BLUDDER	SPOONX	BOFLAP	REFERENCE INFORMATION	
.000	.000	54.920	.000	SREF	2690.0000 SQ.FT.
				LREF	474.8100 IN.
				BREF	936.6800 IN.
				XMRP	1076.4800 IN.
				YMRP	400.0000 IN.
				ZMRP	400.0000 IN.
				SCALE	.0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: \bigcirc (B00063) CONFIGURATION DESCRIPTION: AVES 3.5-160 DALLIB (B10F4C507M3-8)(V87E18)(V5R5)
 REFERENCE INFORMATION:
 SREF: 2690.0000 SO.FT.
 LREF: 474.8100 IN.
 GREF: 936.6800 IN.
 XTRP: 1076.4800 IN.
 YTRP: 400.0000 IN.
 ZTRP: 400.0000 IN.
 SCALE: .0150

ELEVON: .000
 RUDDER: .000
 SPOILER: 54.920
 BODYFLAP: .000

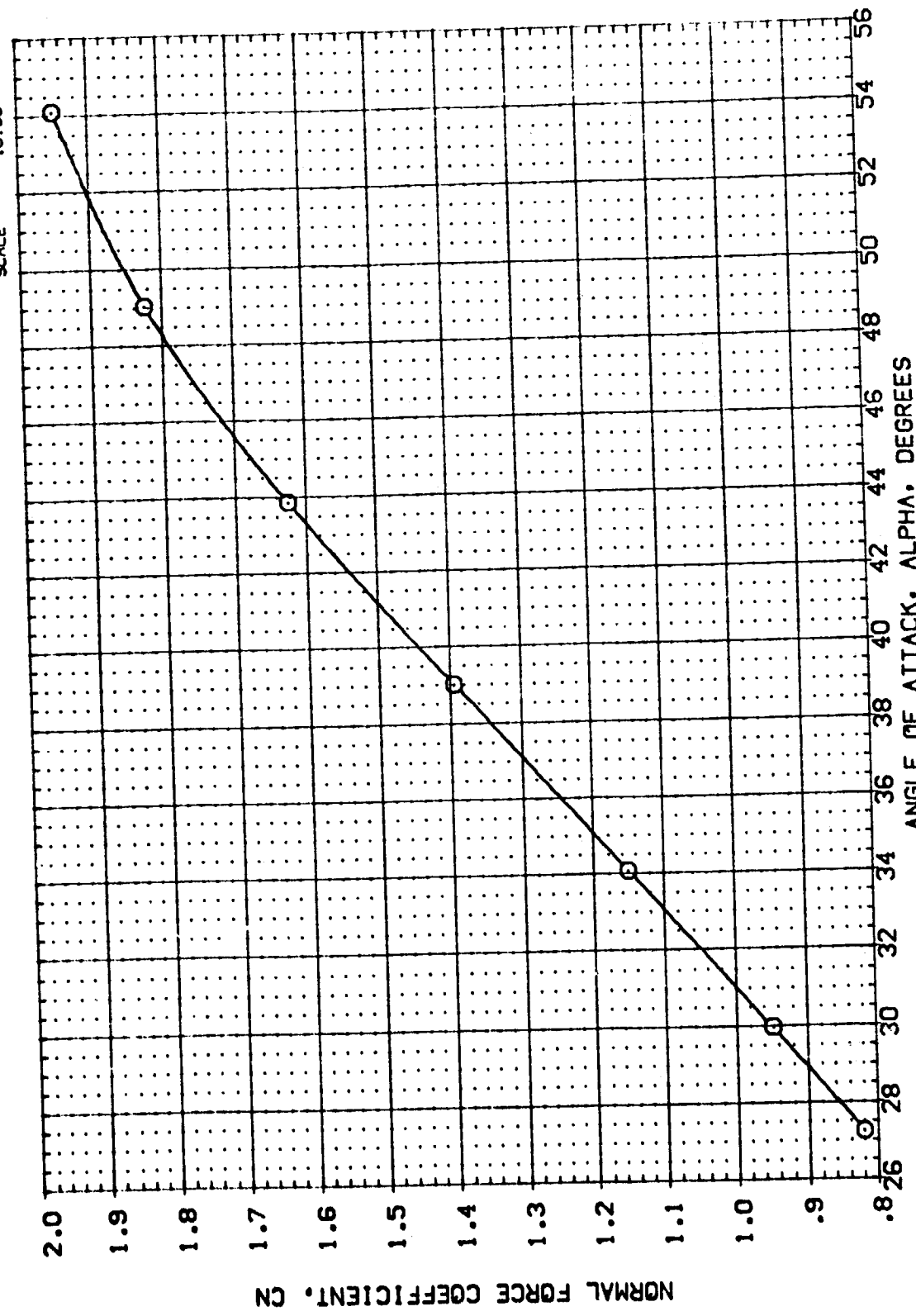


FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: 0
 CONFIGURATION DESCRIPTION: ARES 3.5-160 OA118 (B10F4C507H3-8)(V87E18)(V5R5)
 REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: 400.0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

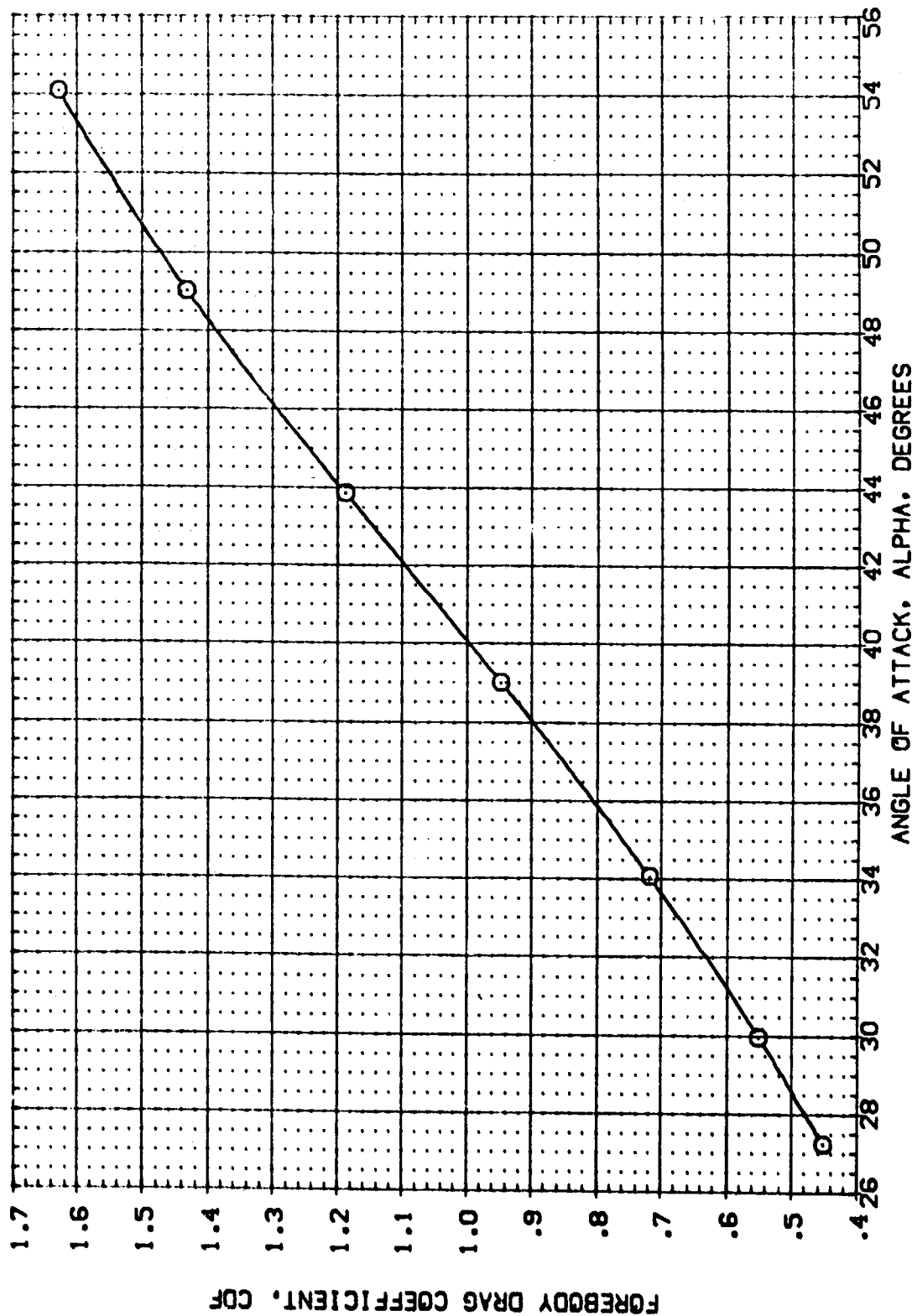


FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS
 (A)MACH = 5.26

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(880063) O APES 3.5-160 OA118 (810F4C507M08)(W87E18)(V5R5)

ELEVON RUDDER SP0BRK BDFLAP
.000 .000 54.920 .000

REFERENCE INFORMATION
SREF 2690.0000 50. FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

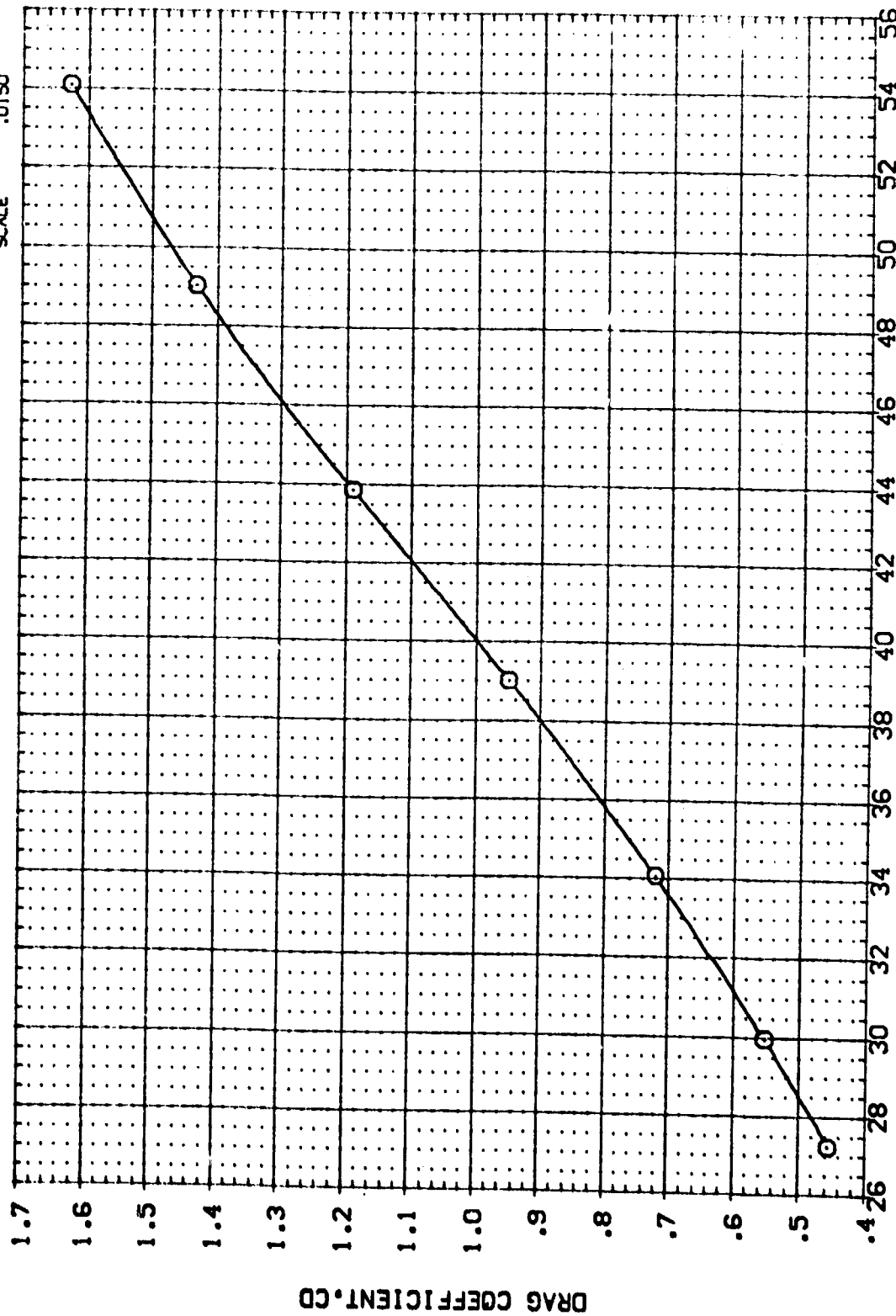


FIG. 4.8.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL (58063) ○ CONFIGURATION DESCRIPTION AVES 3.5-160 CA118 (B10F4C50703N8)(V07E18)(V5R5)

REFERENCE INFORMATION			
SREF	2690.0000	50.FT.	
LREF	474.8100	IN.	
BREF	936.6800	IN.	
XMRP	1076.4800	IN.	
YMRP	.0000	IN.	
ZMRP	400.0000	IN.	
SCALE	.0150		

ELEVON RUDDER SPOILER BODYFLAP
.000 .000 .000 .000

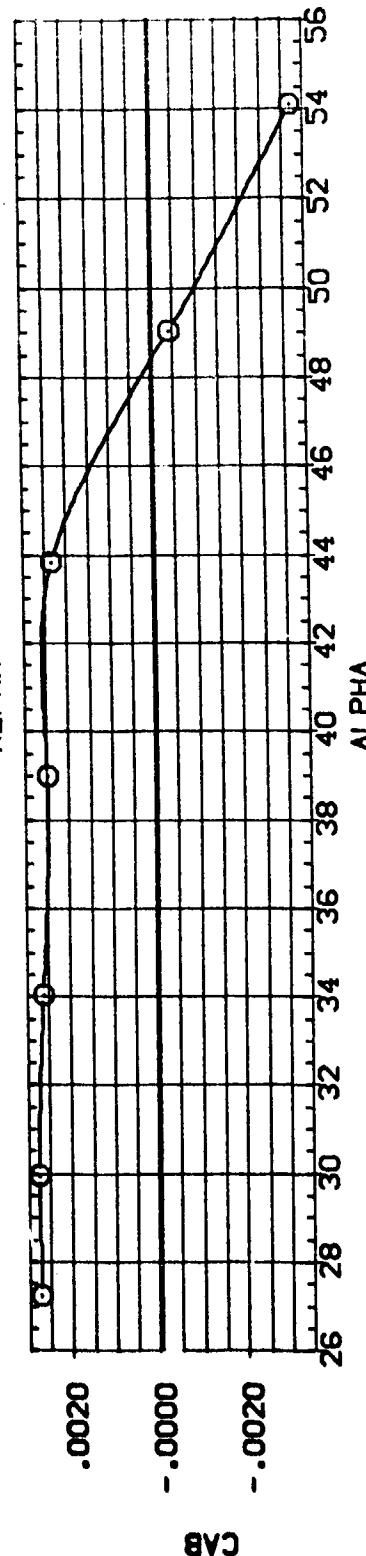
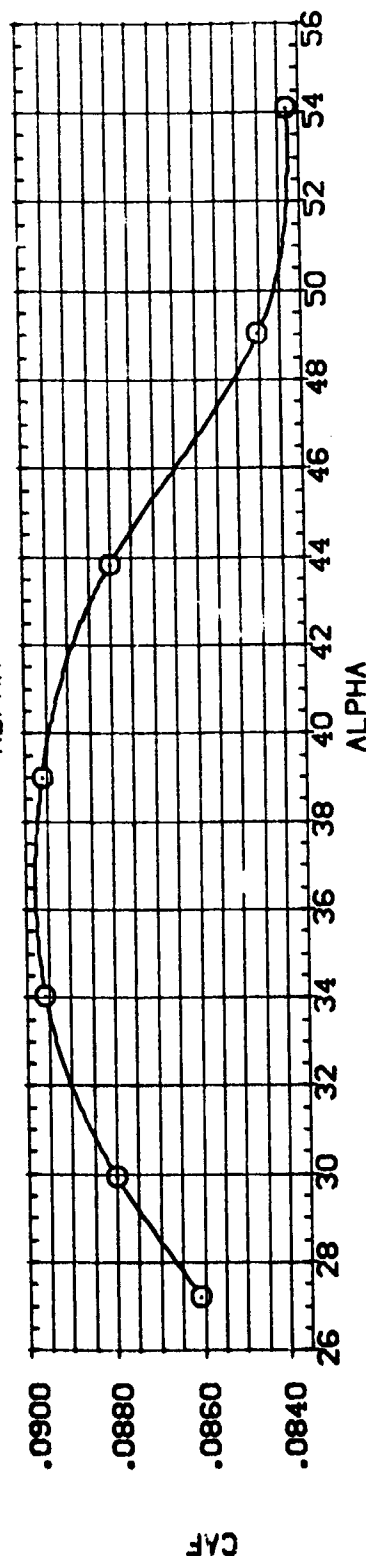
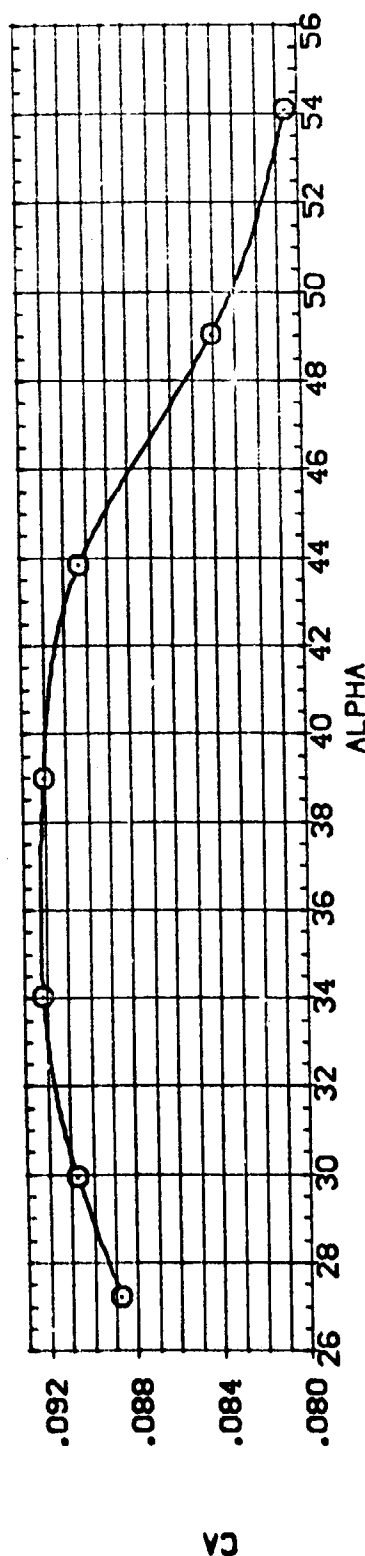


FIG. 4.8.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS
(A)MACH = 5.26

REFERENCE INFORMATION	
SREF	2690.0000 SO.FT.
LREF	474.8100 IN.
BREF	936.6800 IN.
XMRP	1076.4800 IN.
YMRP	.0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

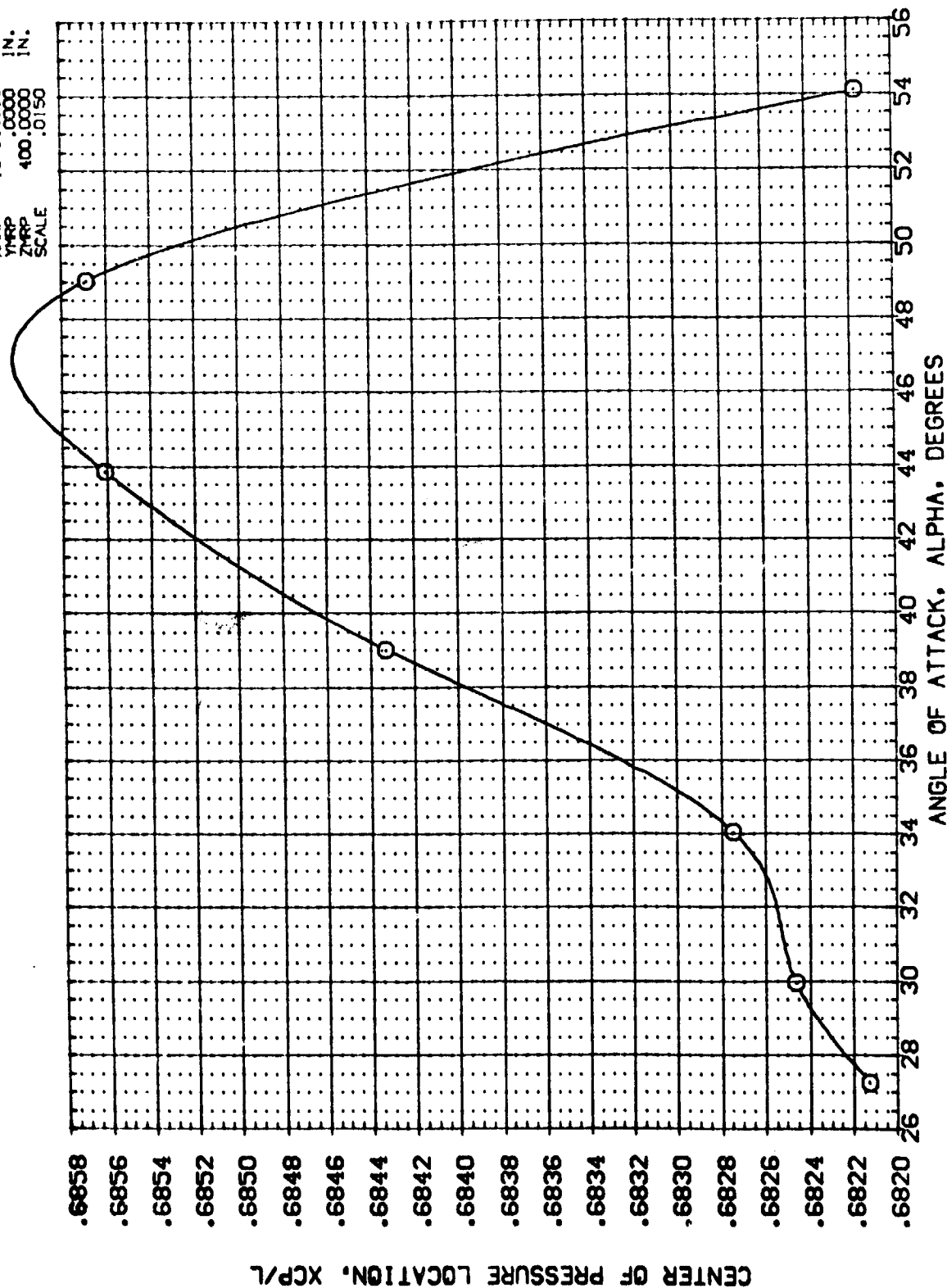


FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS
(A) MACH = 5.26



DATA SET SYMBOL: (BBX063) ○

CONFIGURATION DESCRIPTION: AVES 3.5-60 0A11B (B10F4C50770318)(V87E18)(V5R5)

ELEVON RUDDER SPDRK BOFLAP

REFERENCE INFORMATION

	2650.0000	SO.FT.
SREF	474.8100	IN.
LREF	936.6800	IN.
BREF	1076.4800	IN.
XMRP	.0000	IN.
YMRP	400.0000	IN.
ZMRP	.0150	IN.
SCALE		

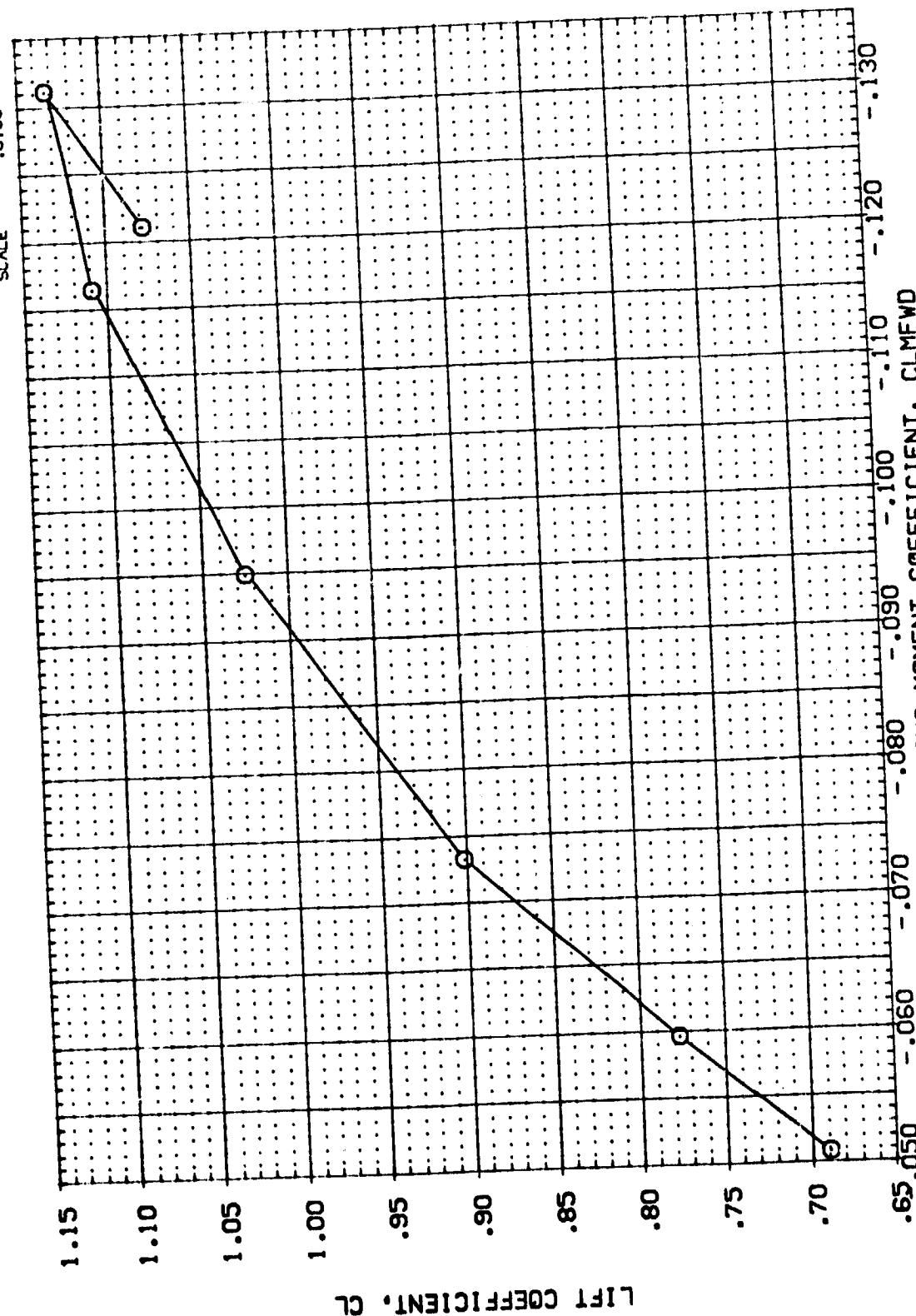


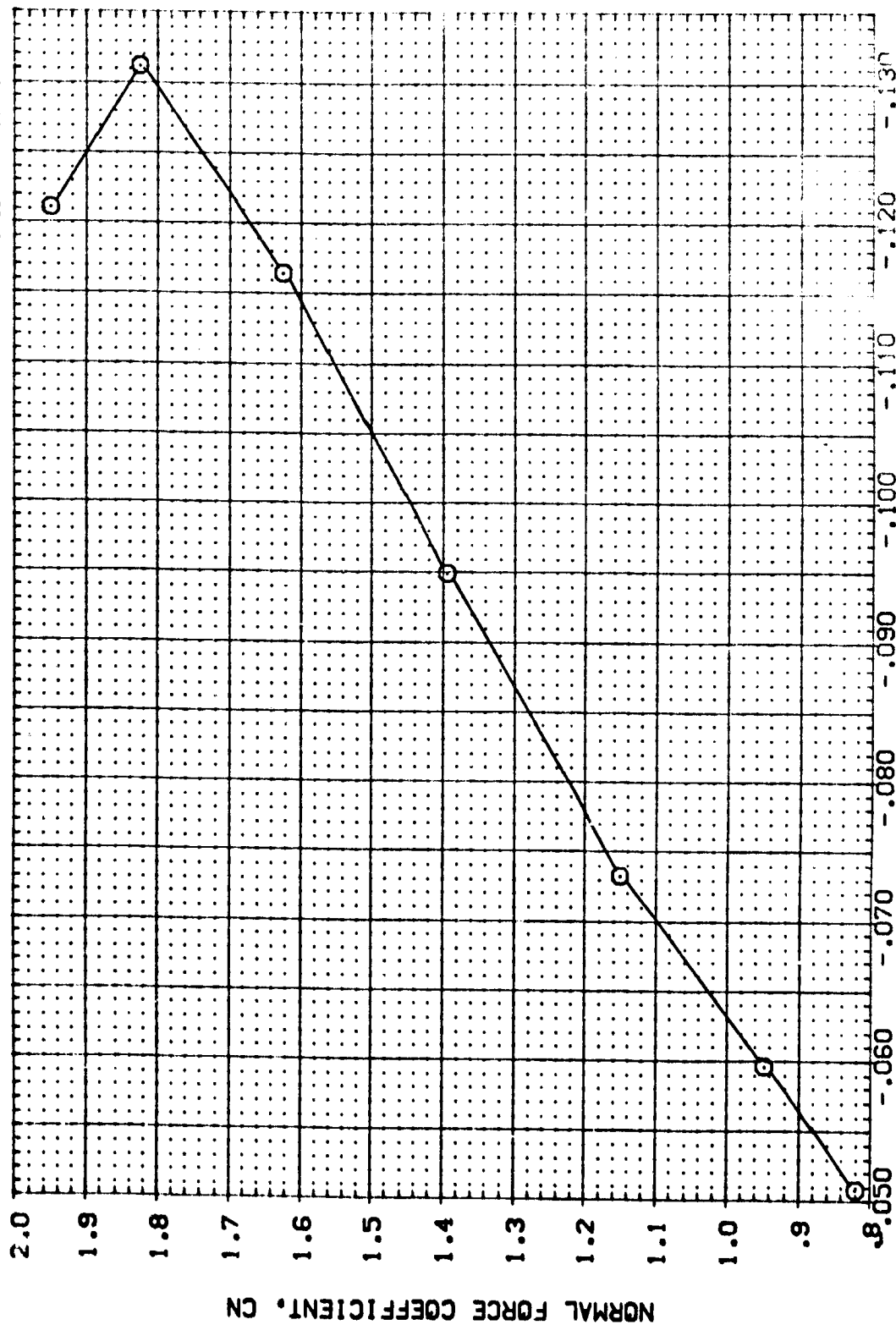
FIG. 4.8.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (BD063) \bigcirc CONFIGURATION DESCRIPTION: ARES 3.5-160 QAL18 (B10F4CSD7M3N8)(V87E18)(V5R5)

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 BOFLAP: .000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS

(A) MACH = 5.26



DATA SET SYMBOL: (BB0063) CONFIGURATION DESCRIPTION: (810F4CSD7KGNB)(V87E10)(V5R5)

REFERENCE INFORMATION:

SREF	2690.0000	SO.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

ELEVON: .000 RUDDER: .000 SPOBRK: 54.920 BODYFLAP: .000

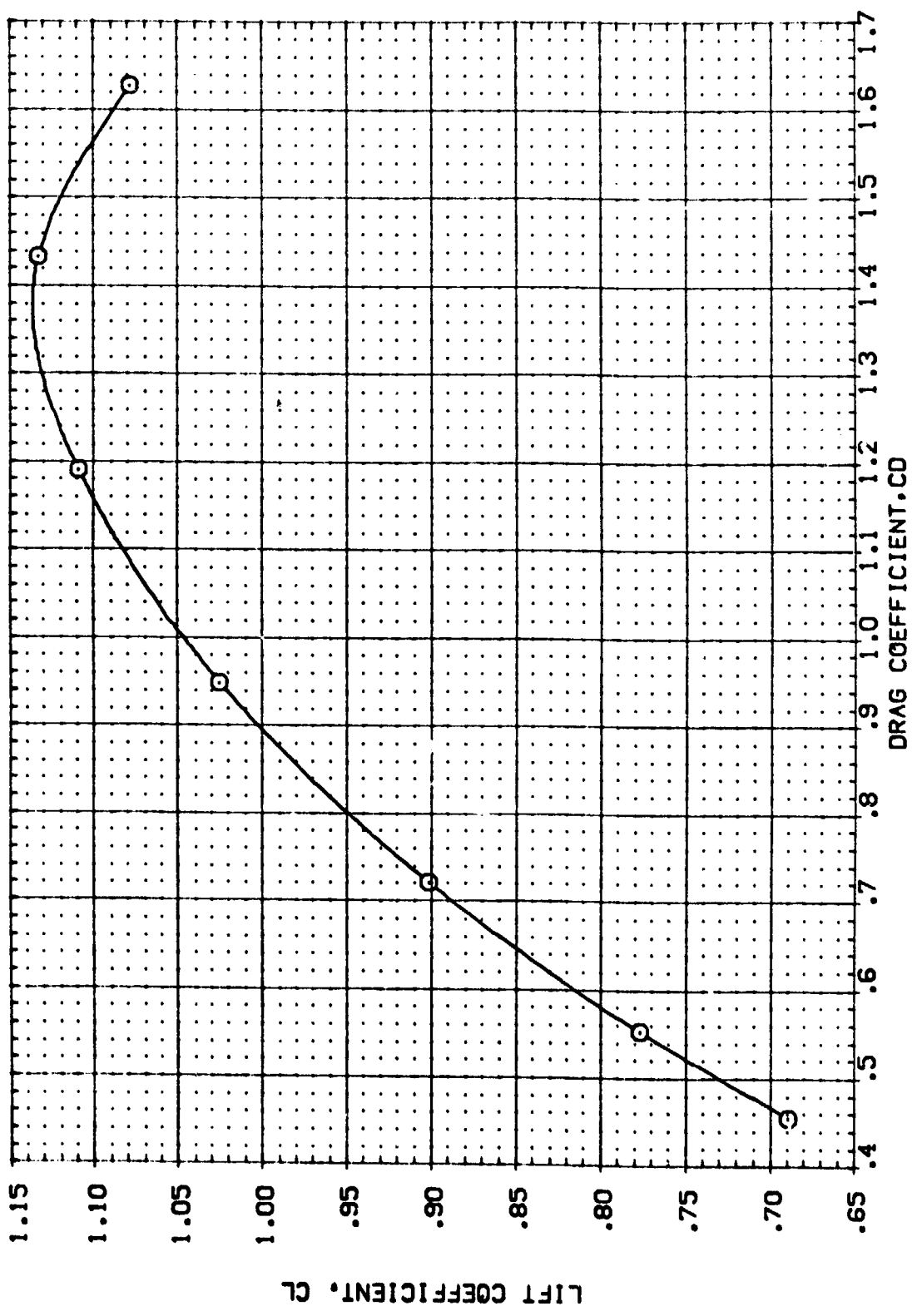


FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL: \bigcirc CONFIGURATION: DESCRIPTION: ARES 3.5-160 GA118 (B10F4C507M3-8)(V87E18)(V95K5)

REFERENCE INFORMATION:

REF	BOFLAP	SPDRK	RUDER	ELEVON	SO.FT.
SREF	.000	54.920	.000	.000	2690.0000
LREF					474.8100
BREF					936.6800
XREF					1076.4800
YREF					400.0000
ZREF					400.0000
SCALE					.0150

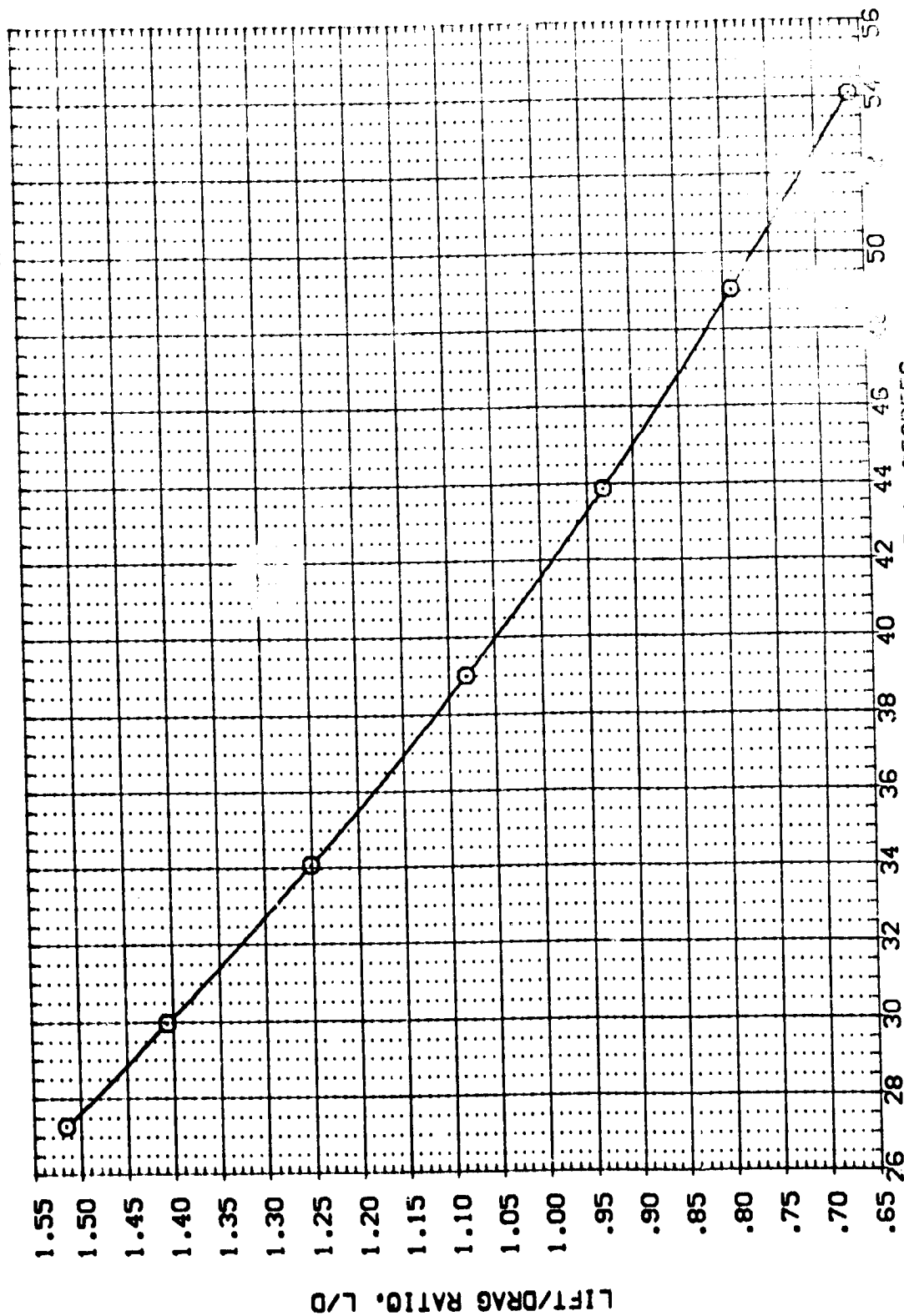


FIG. 4.B.1 MACH 5.26 UNDEFLECTED BODYFLAP EFFECTS
(A) MACH = 5.26



DATA SET SYMBOL: (BBX014) (BBX033) CONFIGURATION DESCRIPTION: AYES 3.5-160 CA11B (B10F4C5D7M3-8) (V87E18) (V5R5) AYES 3.5-160 CA11B (B10F4C5D7M3-8) (V87E18) (V5R5)

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 BOFLAP: .000

REFERENCE INFORMATION:
 SREF: 2630.0000 SC.FT.
 LREF: 474.8100 IN.
 BREF: 936.6900 IN.
 XREF: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: .0000 IN.
 SCALE: 400.0150

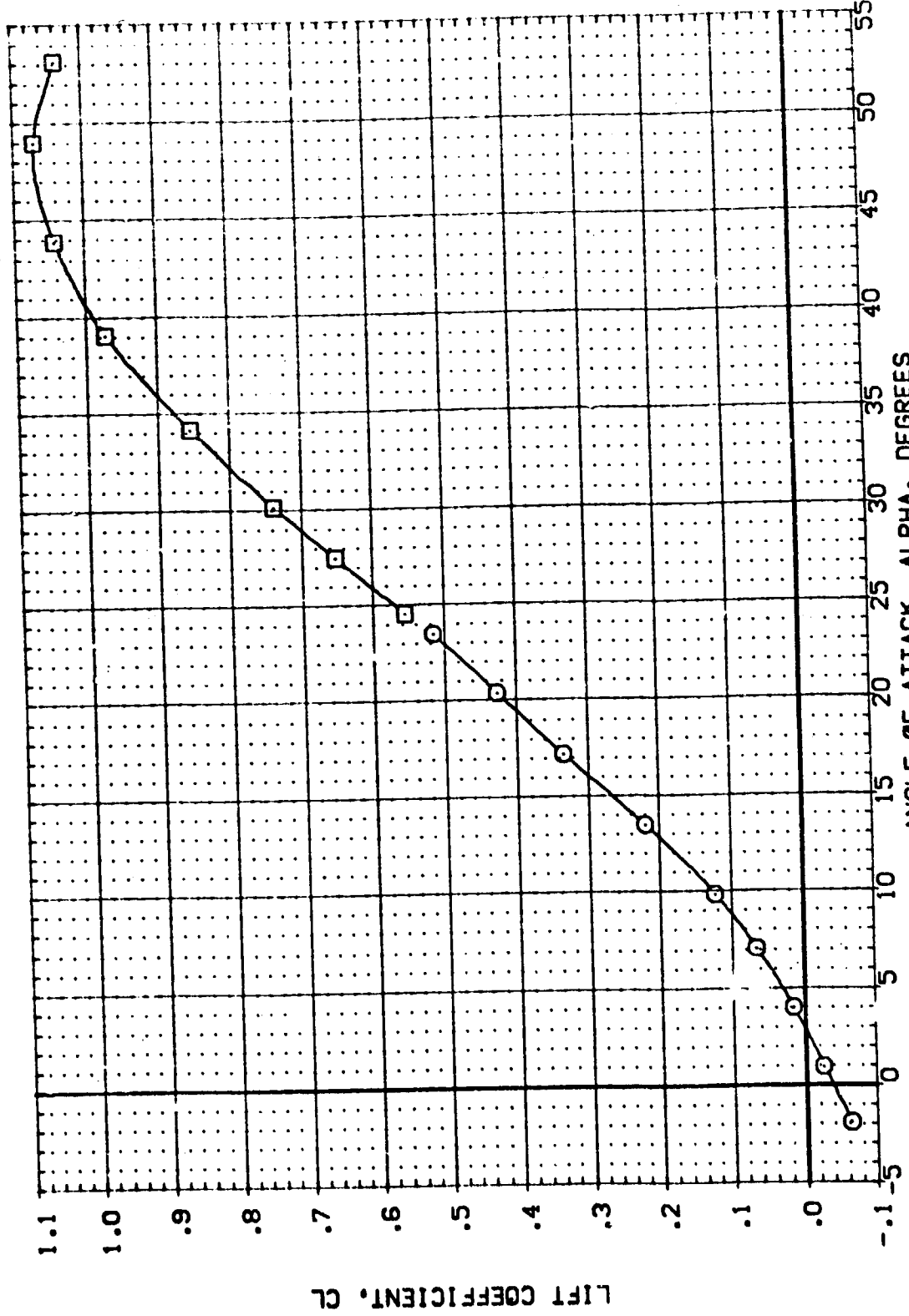


FIG. 4.8.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL: (880014) (880033) CONFIGURATION DESCRIPTION: ASES 3.5-160 CA118 (810F4C507M3-8) (V87E18) (VSRS) ASES 3.5-160 CA118 (810F4C507M3-8) (V87E18) (VSRS)

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6900 IN.
XMRP	1076.4900 IN.
YMRP	400.0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

ELEVON	RUDDER	SPDBRK	BOFLAP
.000	.000	54.920	.000
.000	.000	54.920	.000

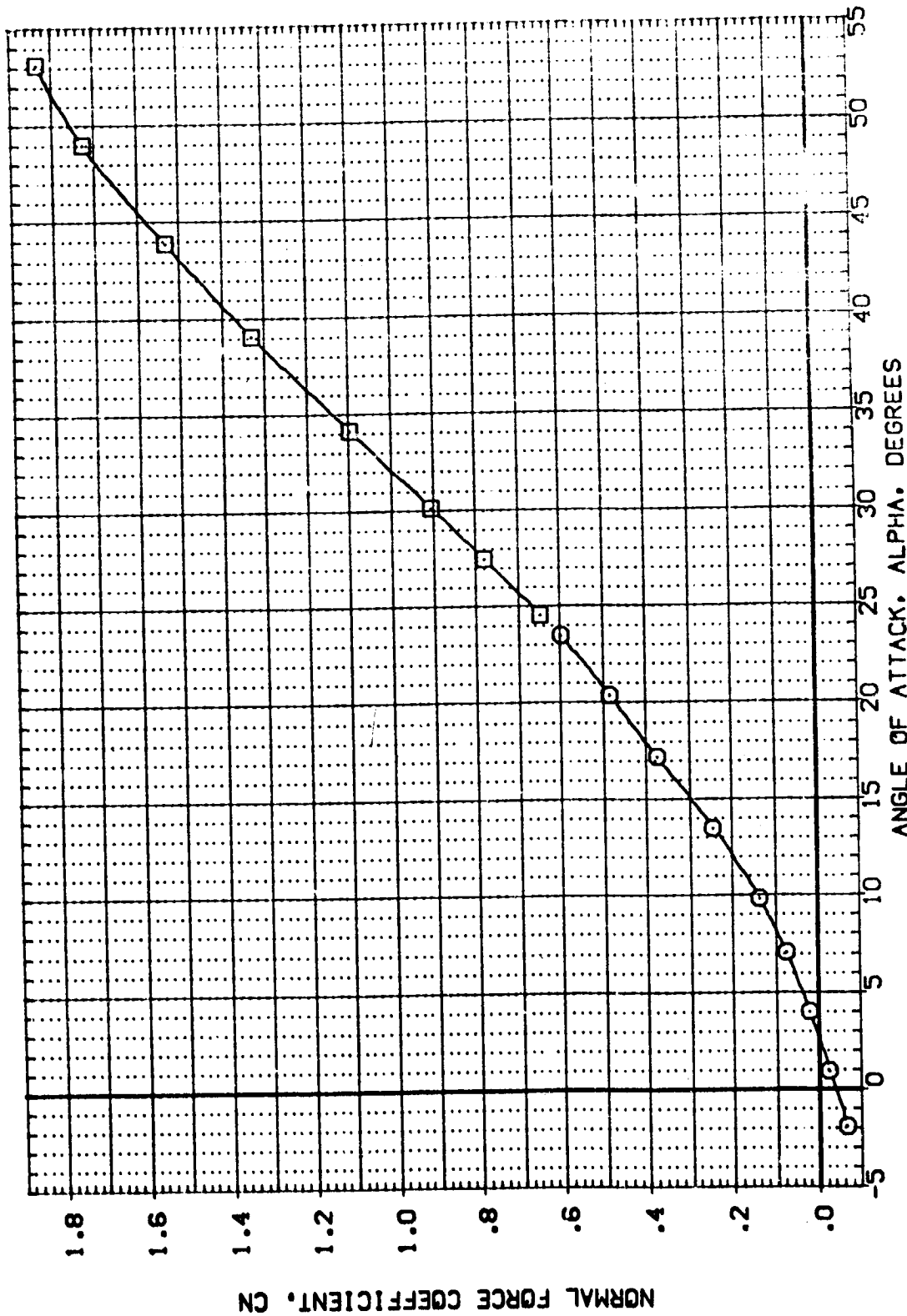


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(BBX014)	AVES 3.5-160 DA11B (B10F4C507G4B)(V87E18)(V95S)	.000	.000	S4.920	.000	SREF 2690.0000 SQ.FT.
(BBX033)	AVES 3.5-160 DA11B (B10F4C507G4B)(V87E18)(V95S)	.000	.000	S4.920	.000	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XREF 1076.4800 IN.
						YREF .0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

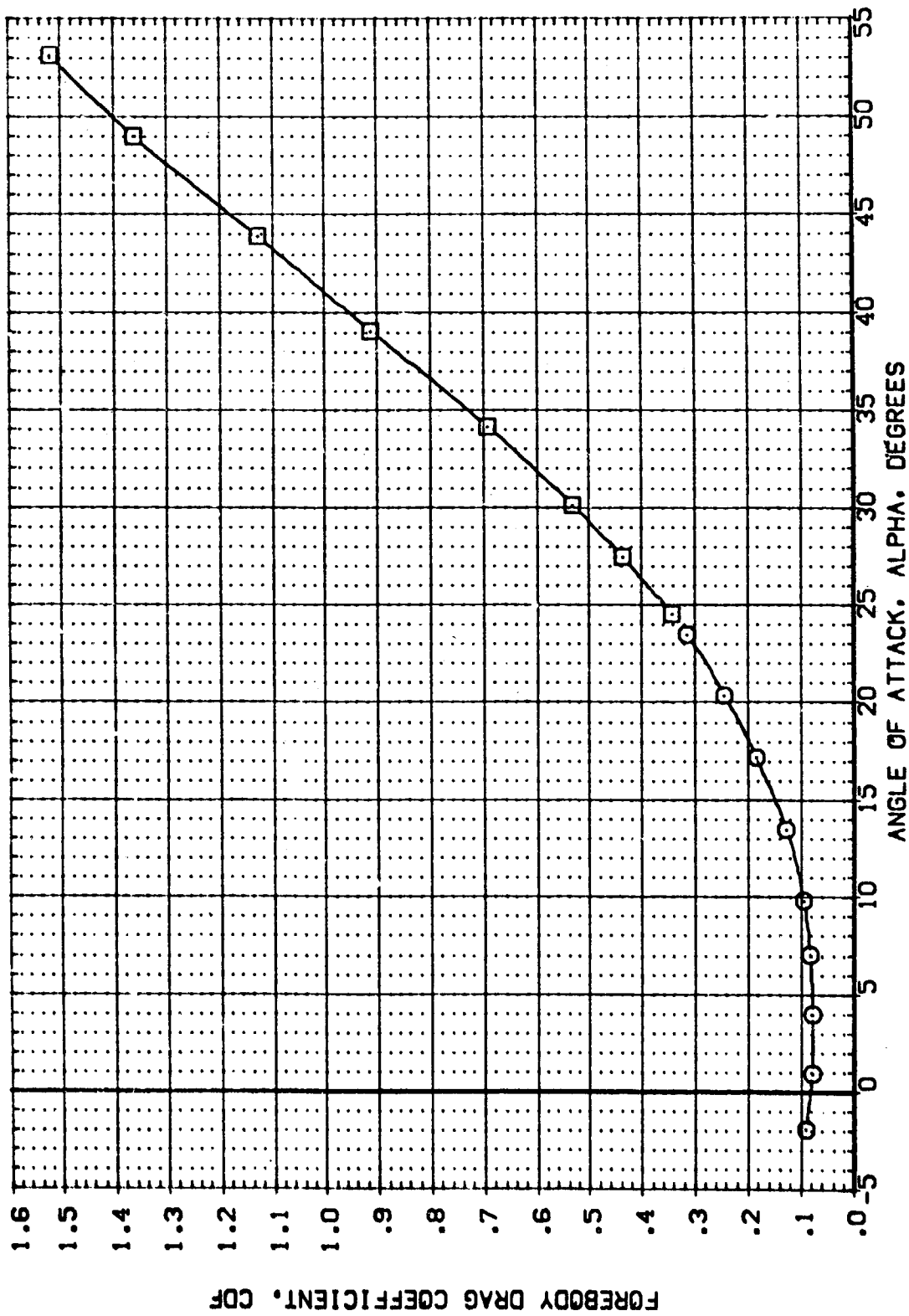


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL (BBX014)
(BBX033)

CONFIGURATION DESCRIPTION
AVES 3.5-160 DA118 (B1D4C507G-B)(V87E18)(V395)
AVES 3.5-160 DA118 (B1D4C507G-B)(V87E18)(V395)

ELEVON RUDDER SPOILER BODYFLAP
.000 .000 .000 .000

REFERENCE INFORMATION
SREF 2690.0000 50.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.1800 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

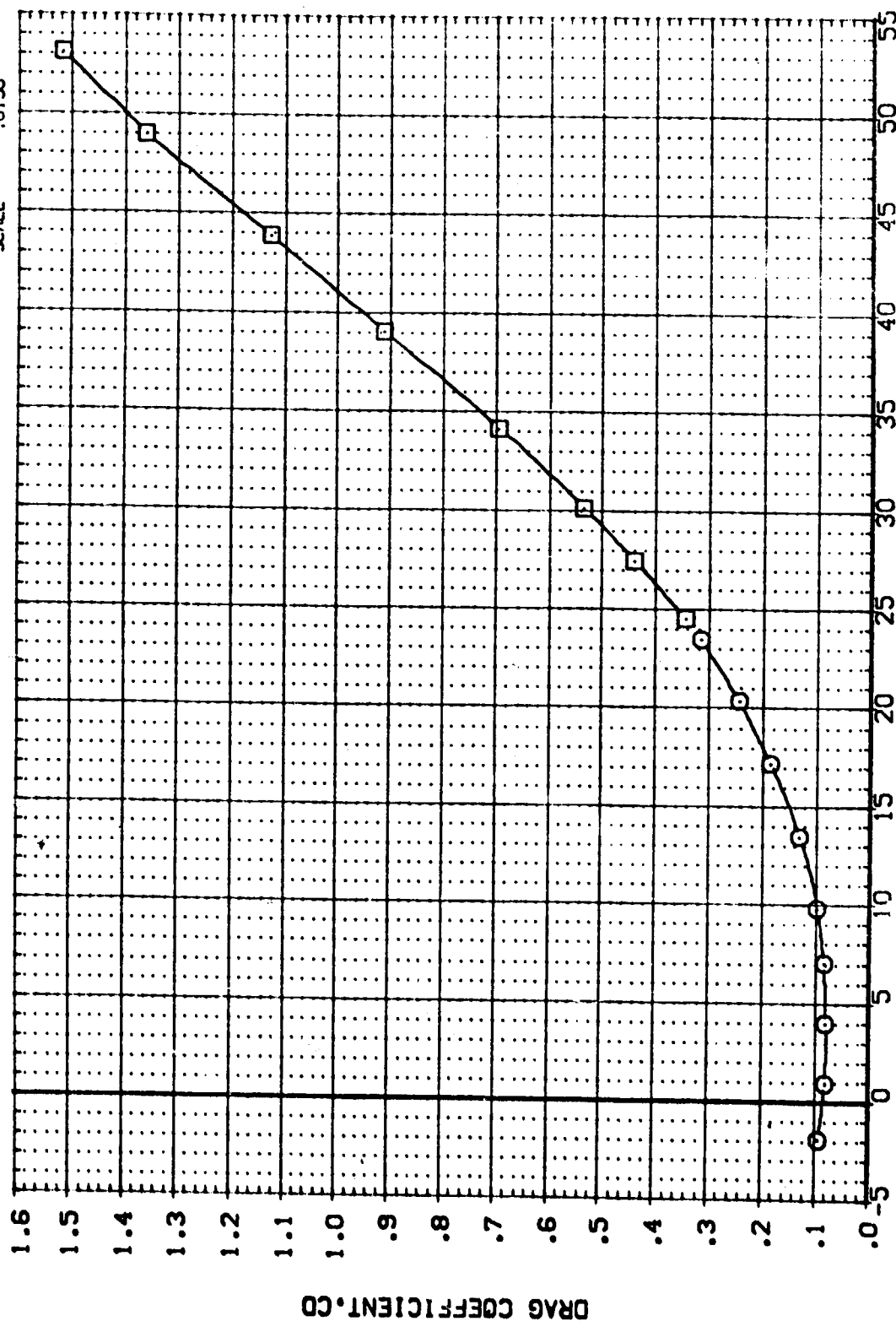



FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A) MACH = 7.32



DATA SET SYMBOL: (BBX014) (BBX033)  CONFIGURATION DESCRIPTION: ARES 3.5-160 CA118 (B) OF 4C5D7H3-8 (V87E13) (V985) ARES 3.5-160 CA113 (B) OF 4C5D7H3-8 (V87E13) (V985)

ELEVON RUDDER SPOILER BOFLAP REFERENCE INFORMATION

SREF	2690.0000	50. FT.
LREF	174.8100	
BREF	936.6800	
XMRP	1076.4800	
YMRP	.0000	
ZMRP	400.0000	
SCALE	.0150	

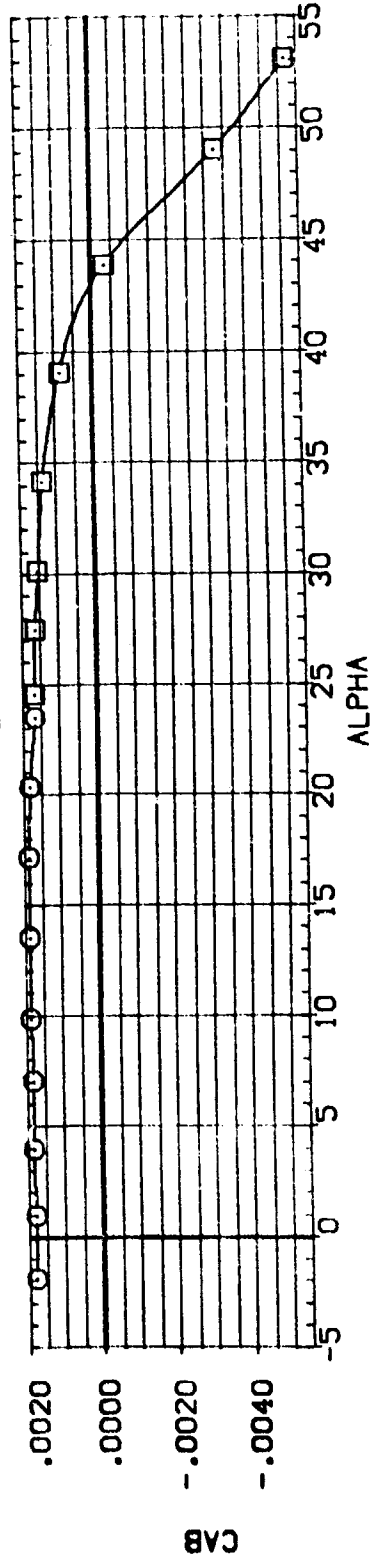
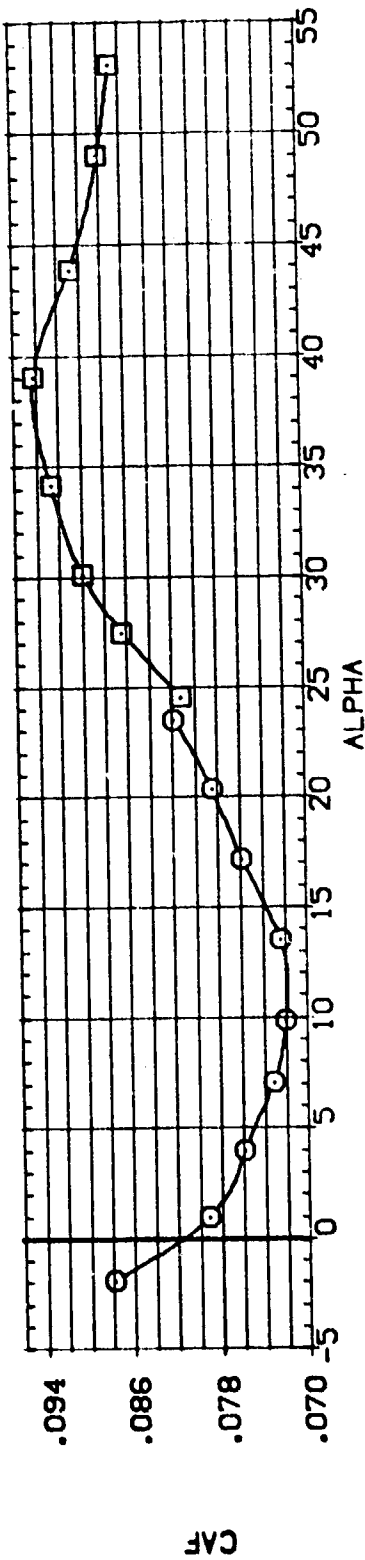
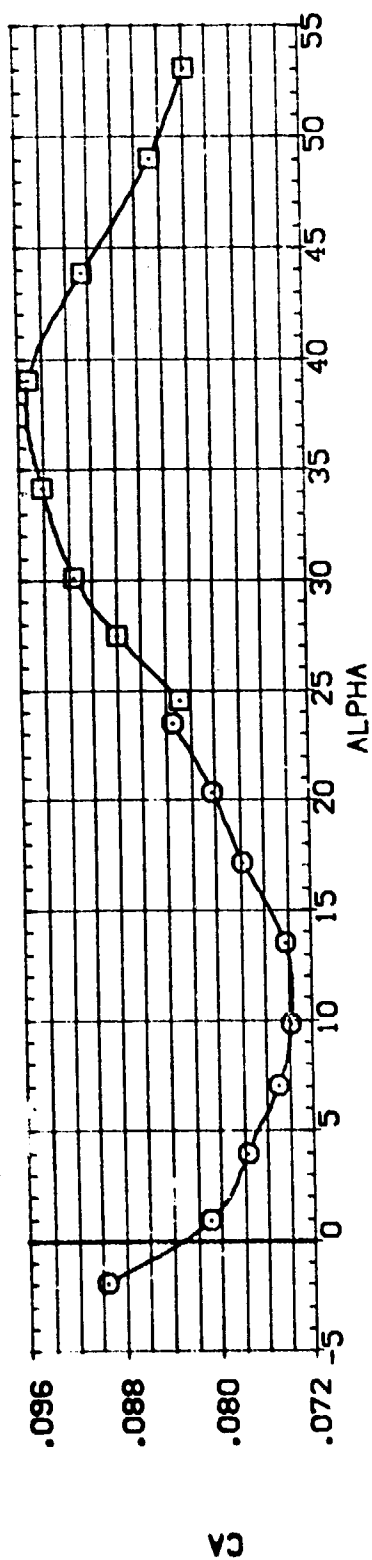


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A) MACH = 7.32

REFERENCE INFORMATION		50. FT.
SREF	2690.0000	IN.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.1800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

ANES 3.5-160 QAI B (B10F4C507QCN0)(V87E10)(V5R5)
ANES 3.5-160 QAI B (B10F4C507QCN0)(V87E10)(V5R5)

ELEVON	RUDER	SPDBRX	BOFLAP
.000	.000	54.920	.000
.000	.000	54.920	.000

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.5800 IN.
XMRP	1076.4900 IN.
YMRP	0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

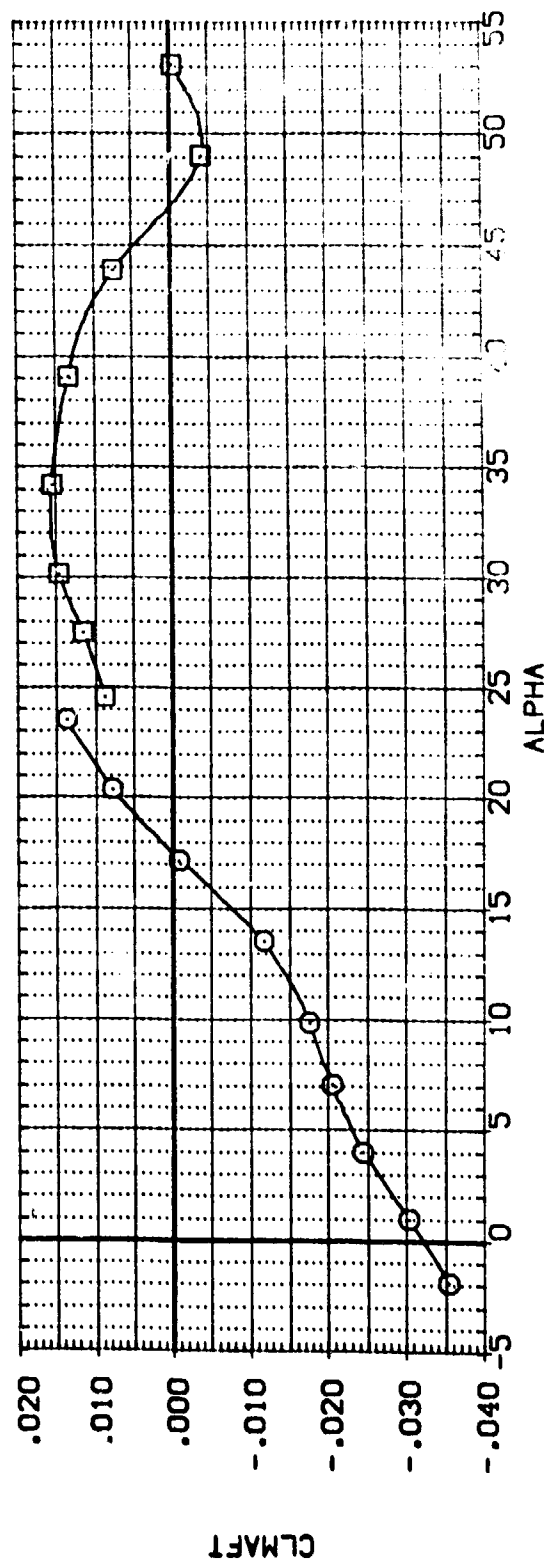
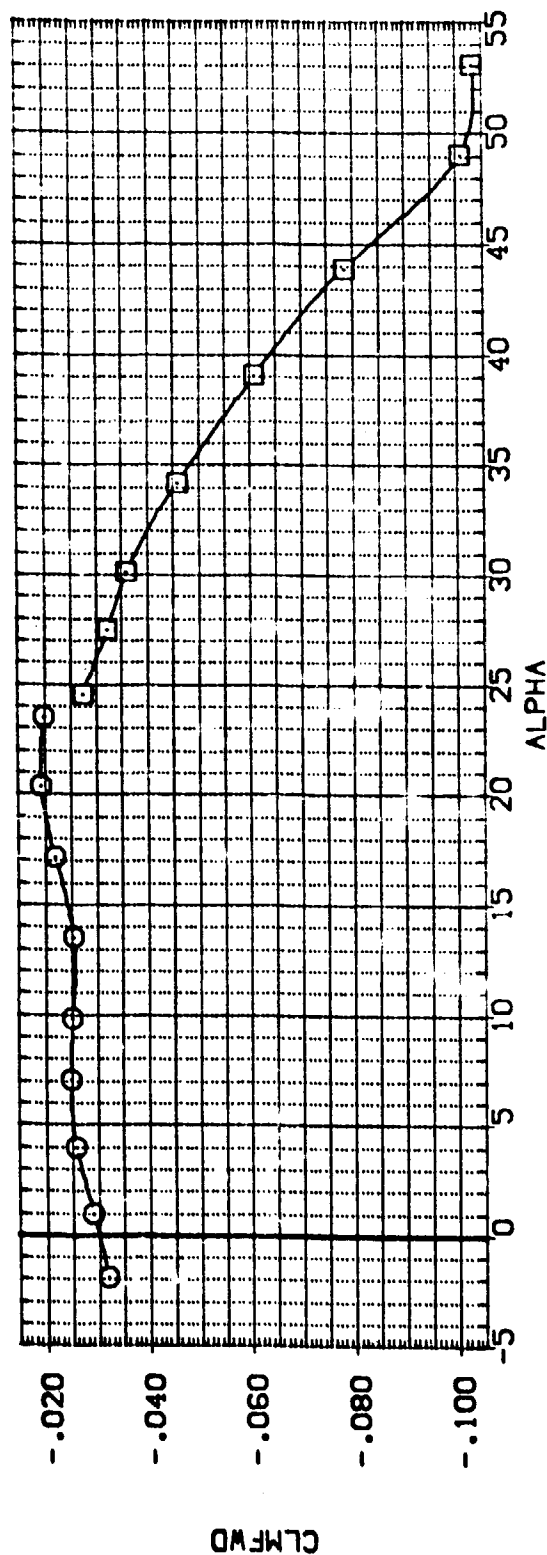


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRK	BDFLAP	REFERENCE INFORMATION
(BBX014)	AMES 3.5-160 CA11B (B10F4C507M3-48)(V87E18)(V5RS)	.000	.000	54.920	.000	SREF 2690.0000 SO.FT.
(BBX033)	AMES 3.5-160 CA11B (B10F4C507M3-48)(V87E18)(V5RS)	.000	.000	54.920	.000	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

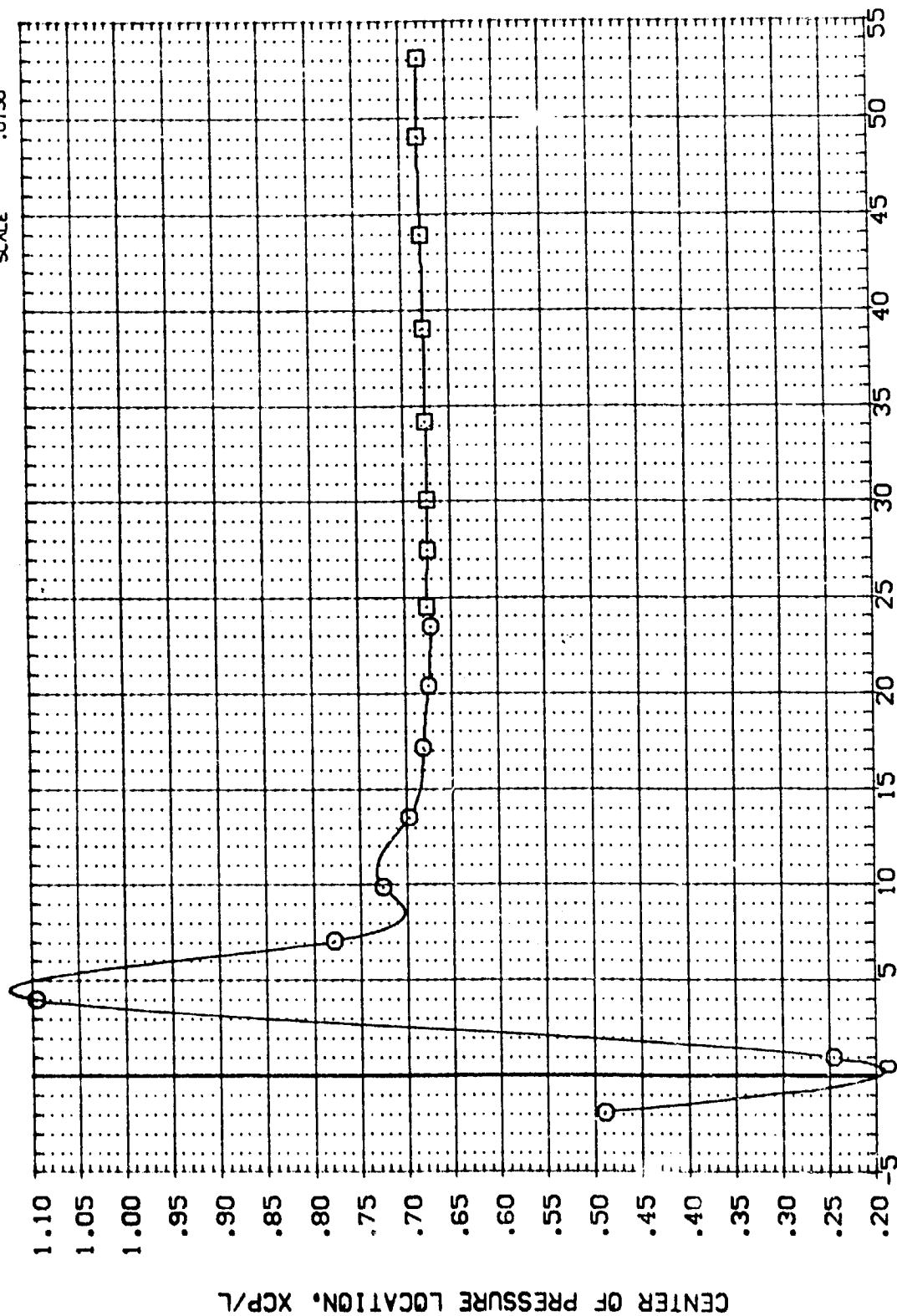


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(880014)	AVES 3.5-160 CA118 (810F4C507K38)(V87E18)(V5R5)	.000	.000	54.920	.000	SREF 2690.0000 SO.FT. IN.
(880033)	AVES 3.5-160 CA118 (810F4C507K38)(V87E18)(V5R5)	.000	.000	54.920	.000	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

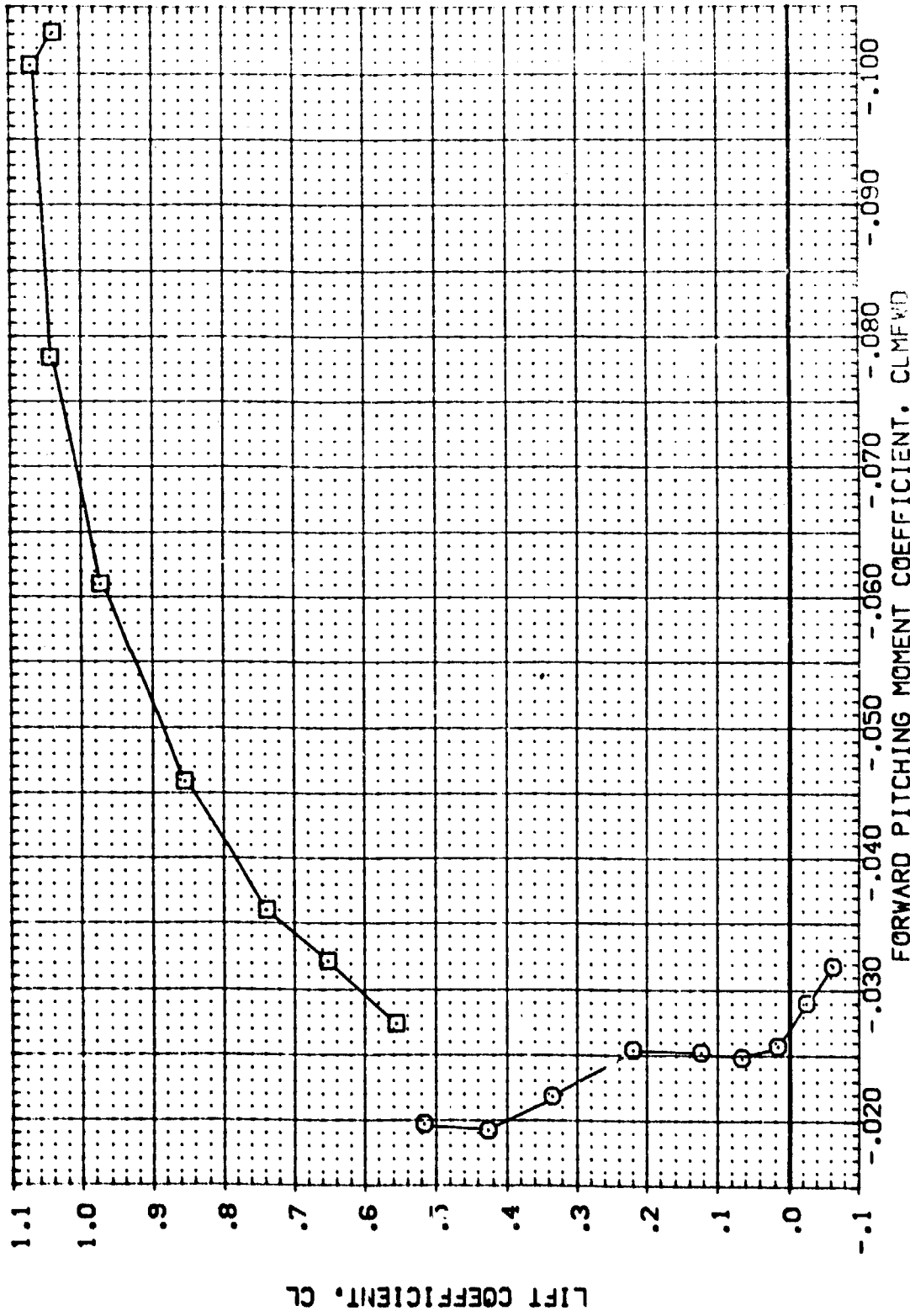


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS
(A)MACH = 7.32

DATA SET SYMBO. (BBX014) (BBX033)

CONFIGURATION DESCRIPTION
 ARES 3.5-160 CALIB (B10F4C507M3-8)(V87E18)(V5R5)
 ARES 3.5-160 CALIB (B10F4C507M3-8)(V87E18)(V5R5)

ELEVON .000
 RUDDER .000
 SPOBRK 54.920
 BOFLAP .000

REFERENCE INFORMATION
 SREF 2690.0000 SD.FT. IN.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XTRP 1076.4800 IN.
 YTRP 400.0000 IN.
 ZTRP .0150 IN.
 SCALE

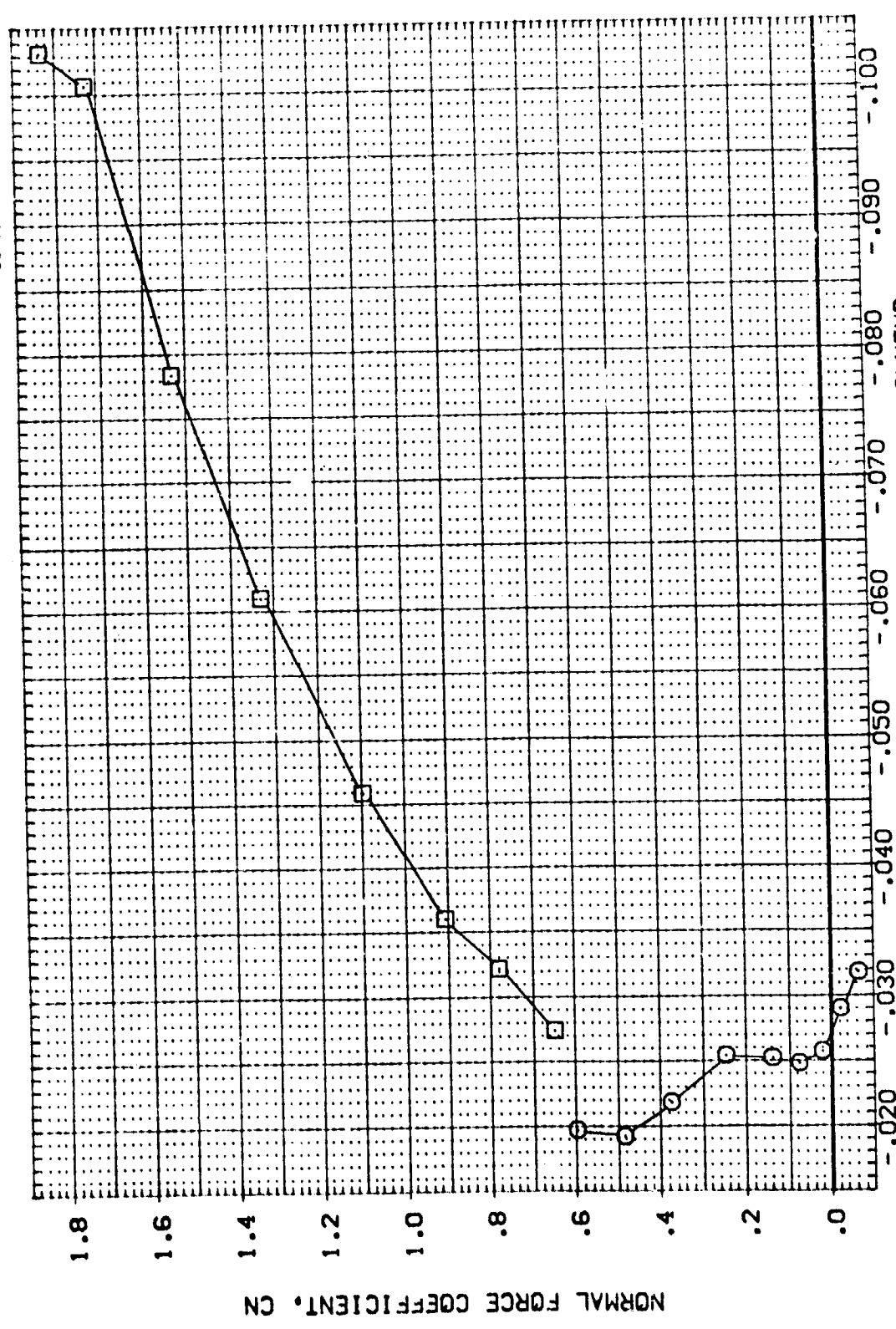


FIG. 4.8.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

DATA SET SYMBOL: (BB0014) (BB0033) CONFIGURATION DESCRIPTION: AMES 3.5-160 OA11B (B10F4C5074348)(187E18)(V595) AMES 3.5-160 OA11B (B10F4C5074348)(187E18)(V595)

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6800 IN.
XMRP	1076.4800 IN.
YMRP	400.0000 IN.
SCALE	400.0150

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 BOFLAP: .000

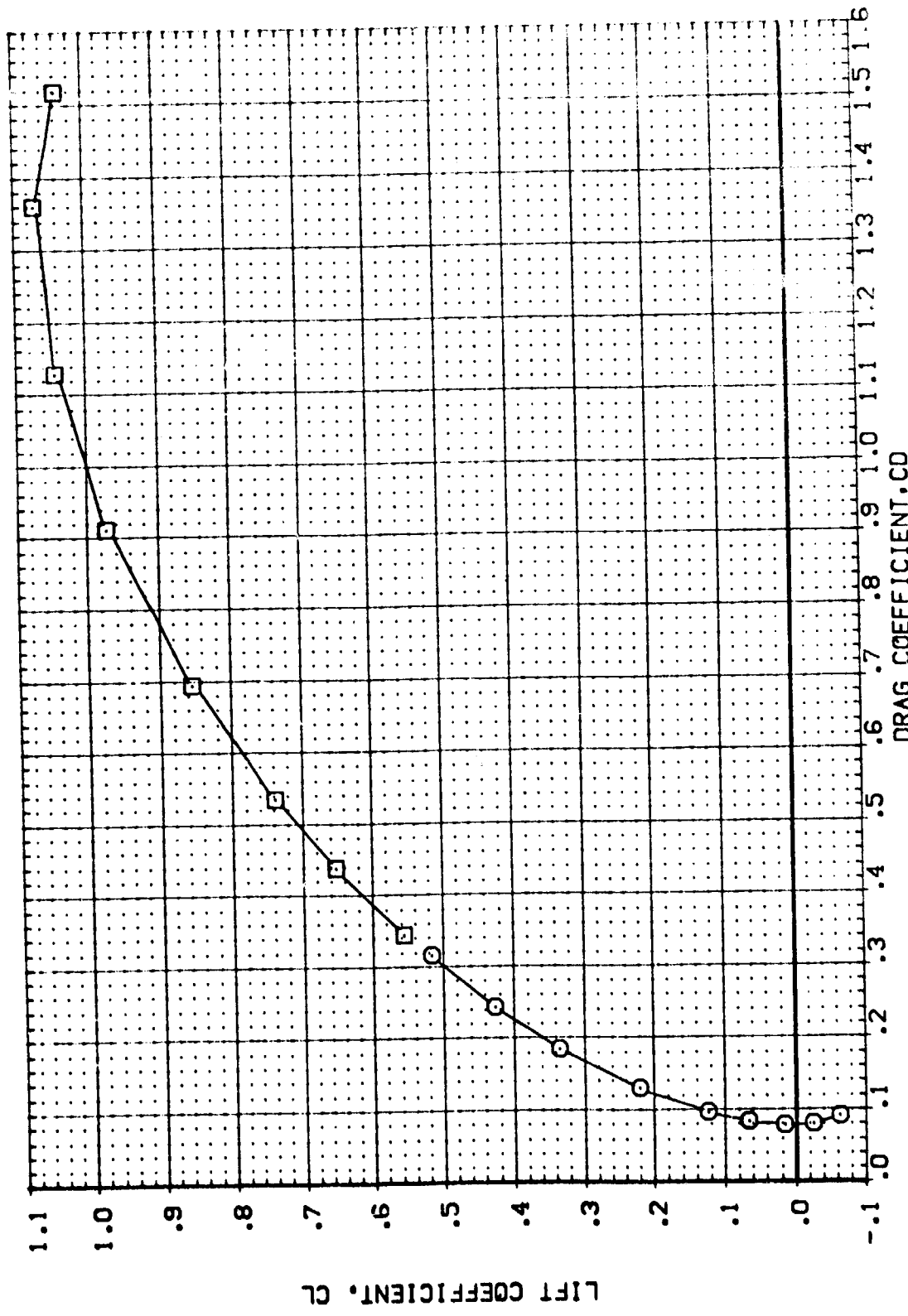


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BODYFLAP	REFERENCE INFORMATION
(ABX014)	AMES 3.5-160 CA11B (B10F4CSL7H3B)(V87E18)(V5F5)	.000	.000	54.920	.000	SREF 2690.0000 SO.FT.
(ABX033)	AMES 3.5-160 CA11B (B10F4CSL7H3B)(V87E18)(V5F5)	.000	.000	54.920	.000	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP 400.0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

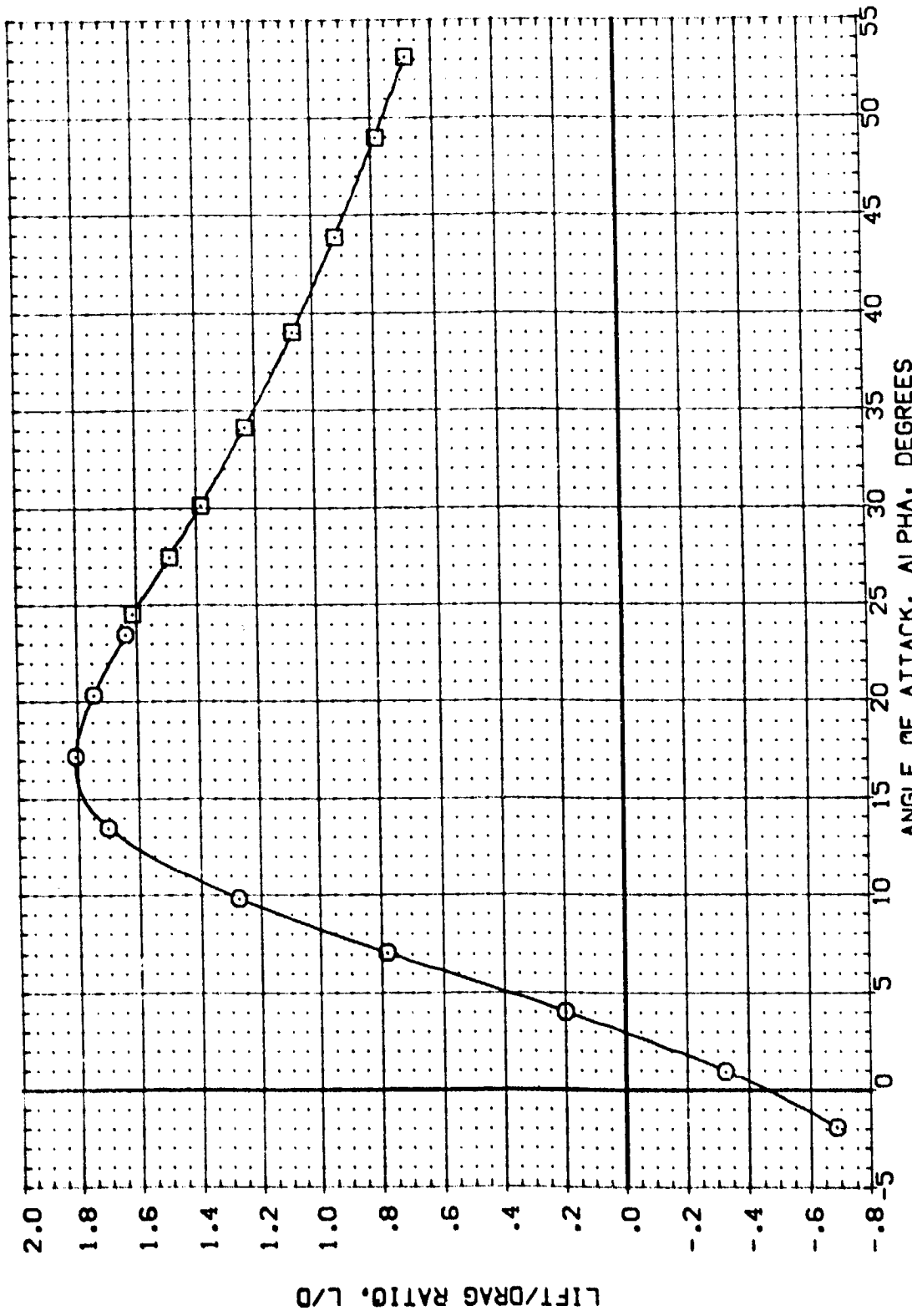


FIG. 4.B.2 MACH 7.32 UNDEFLECTED BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL: (880037) \bigcirc AVES 3.5-160 CA118 (B1074C507G348)(V87E18)(V5R5)

CONFIGURATION DESCRIPTION: RUDDER, SPDBRK, BOFLAP, ELEVON

REFERENCE INFORMATION:

REFERENCE INFORMATION	VALUE	UNIT
SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	400.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

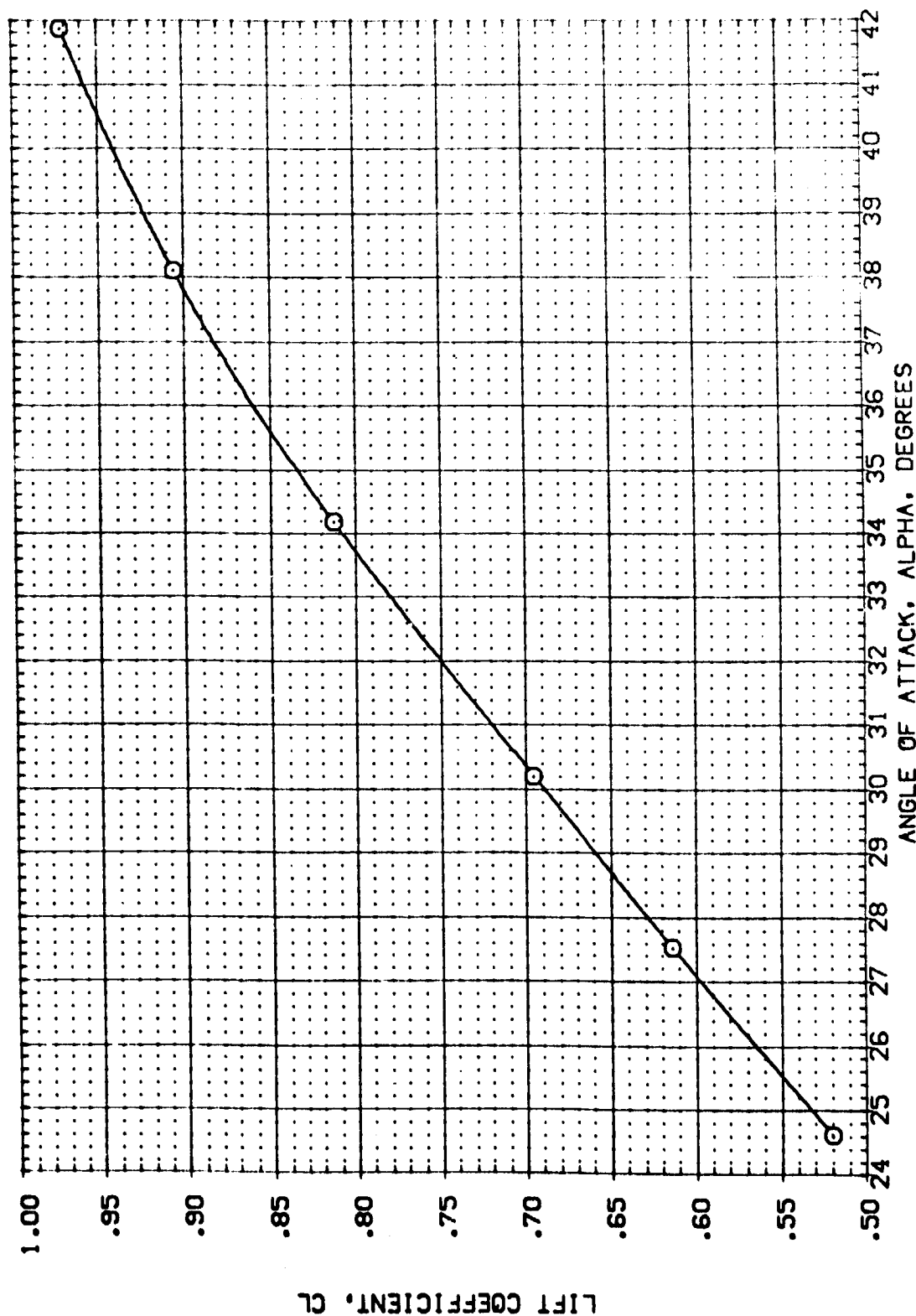


FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A) MACH = 10.29



DATA SET SYMBOL (BBK037) \bigcirc CONFIGURATION DESCRIPTION
 ARES 3.5-160 CA11B (B10F4C5D7H0N8)(V87E18)(V5RS)

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6900 IN.
YMRP	1076.4800 IN.
ZMRP	400.0000 IN.
SCALE	.0150

ELEVON RUDDER SPDRBK BOFLAP
 .000 .000 54.920 .000

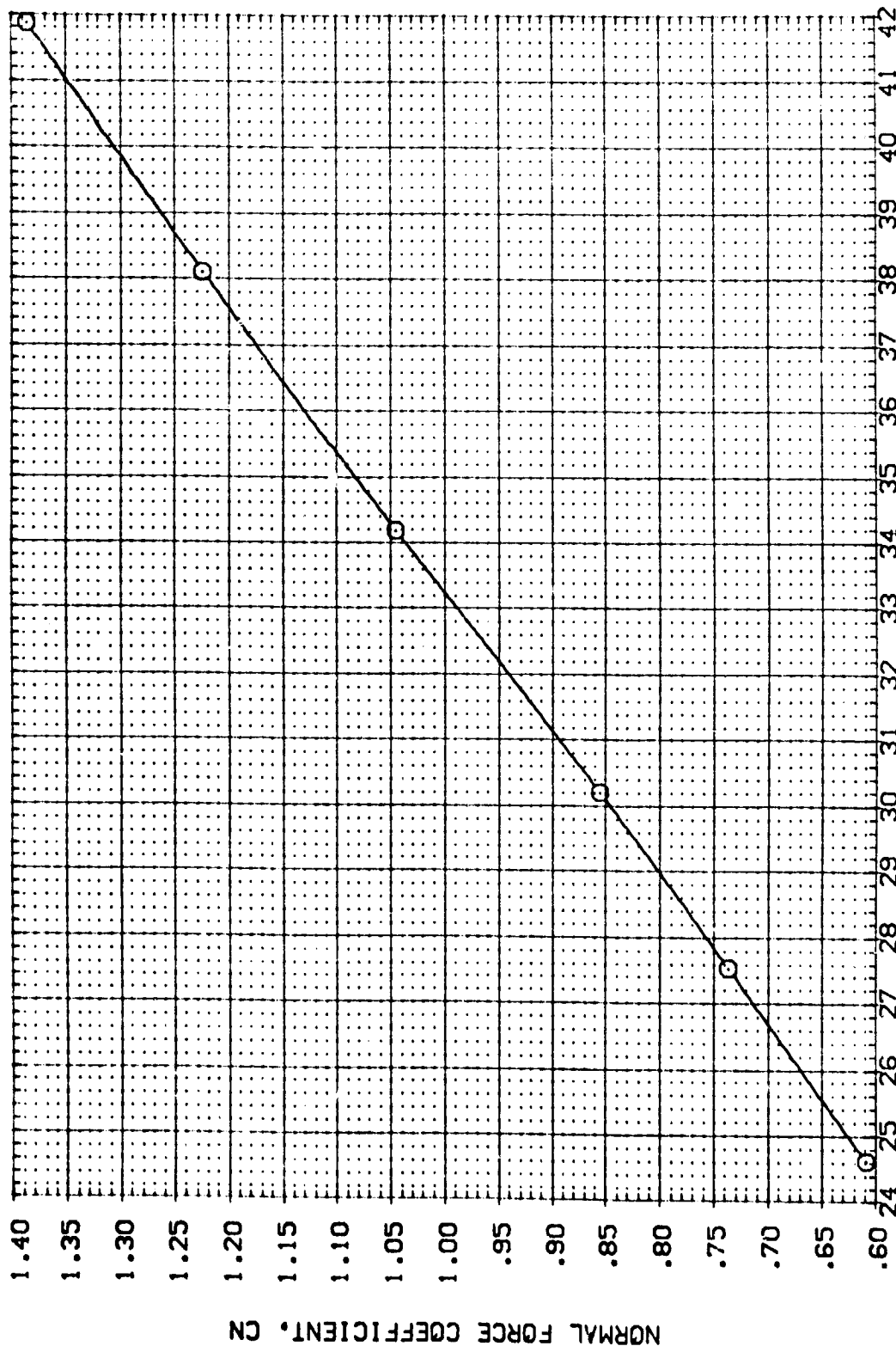


FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(BB0037) O AYES 3.5-160 0A118 (B10F4C507G3G6)(V87E18)(V5K5)

ELEVON RUDDER SP08BK BOFLAP
.000 .000 54.920 .000

REFERENCE INFORMATION
SREF 2690.0000 SO.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP 400.0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

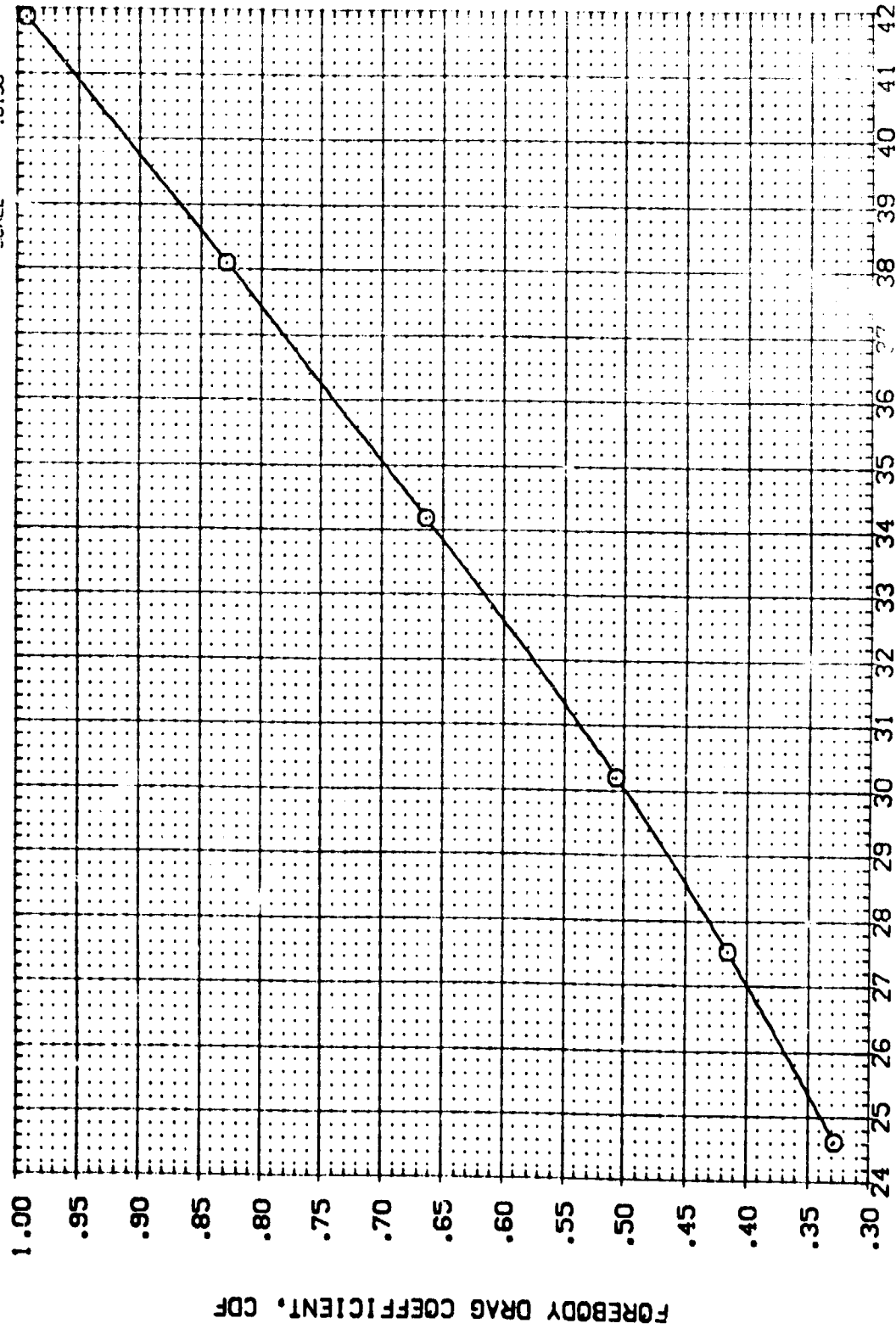


FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL DURATION DESCRIPTION
(88037) O AMES 3.5-160 DAY 1B (B10F4C5D)

AMES 3.5-160 DA 118 (B10F4CSD07H:NB) (V87E10) (VSRS)

ELEVON	RUDDER	SPOILER	BOFLAP
.000	.000	54.920	.000

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6800 IN.
XMRP	1076.4800 IN.
YMRP	0.0000 IN.
ZMRP	400.0000 IN.
SCALE	.9150

SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
YMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

05 0000 0692 JES

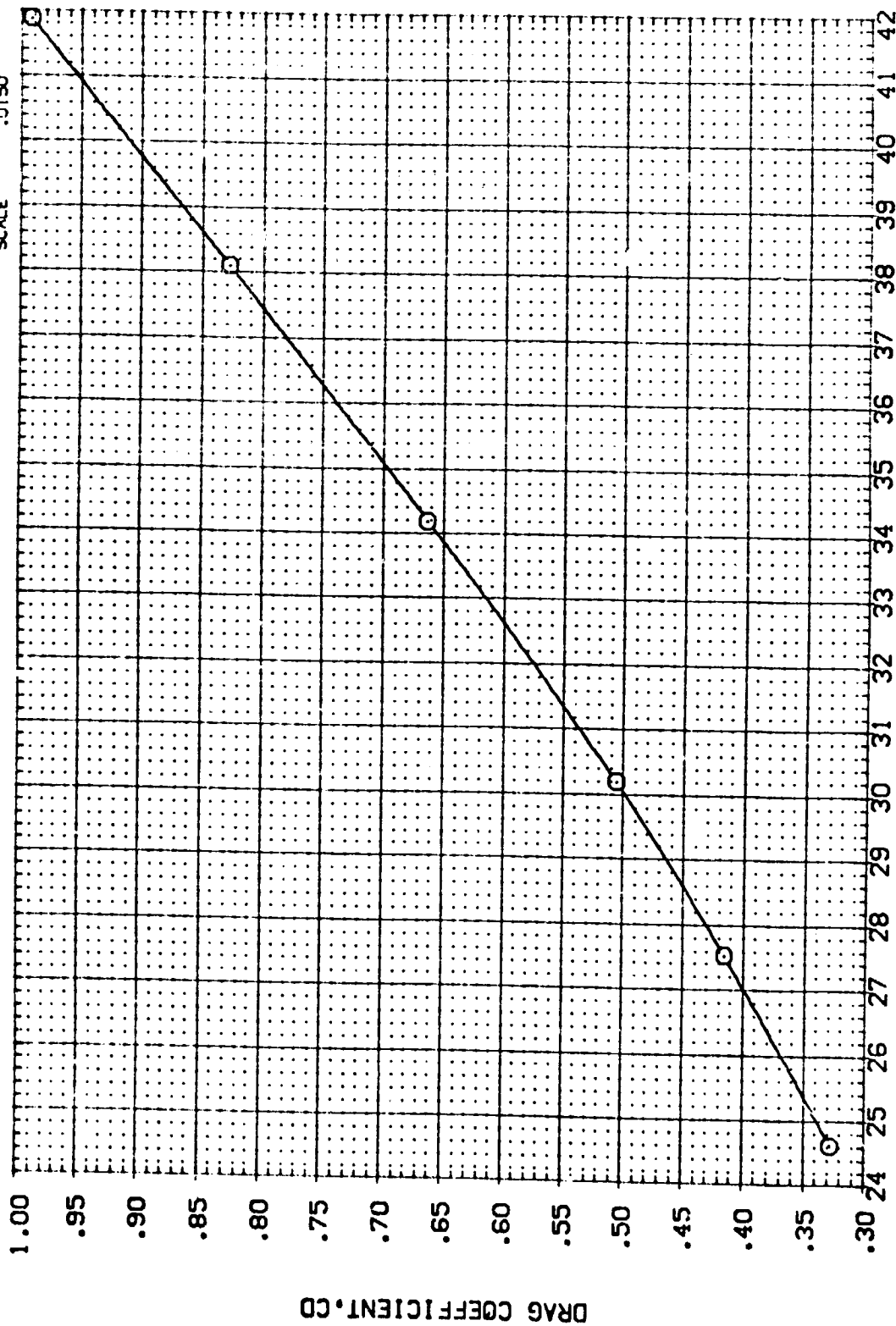
474.8100 IN.

REF	936.6800	936.6800	936.6800
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1346			
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1371			
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1397			
1398			
1399			

	YRP	1076.4800	NZ
	YRP	.0000	NZ

400,0000
ZMRP

SCALE 37425 0516'



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.8.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

CAMACH = 10.29

DATA SET SYMBOL (880037) ○ CONFIGURATION DESCRIPTION (B10F4C507G00)(V07E10)(V5R5)

REFERENCE INFORMATION

PARAMETER	VALUE	UNIT
SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XPRP	1076.4800	IN.
YPRP	400.0000	IN.
ZPRP	400.0000	IN.
SCALE	.0150	

ELEVON RUDDER SPOILER BOFLAP

PARAMETER	VALUE
ELEVON	.000
RUDDER	.000
SPOILER	54.920
BOFLAP	.000

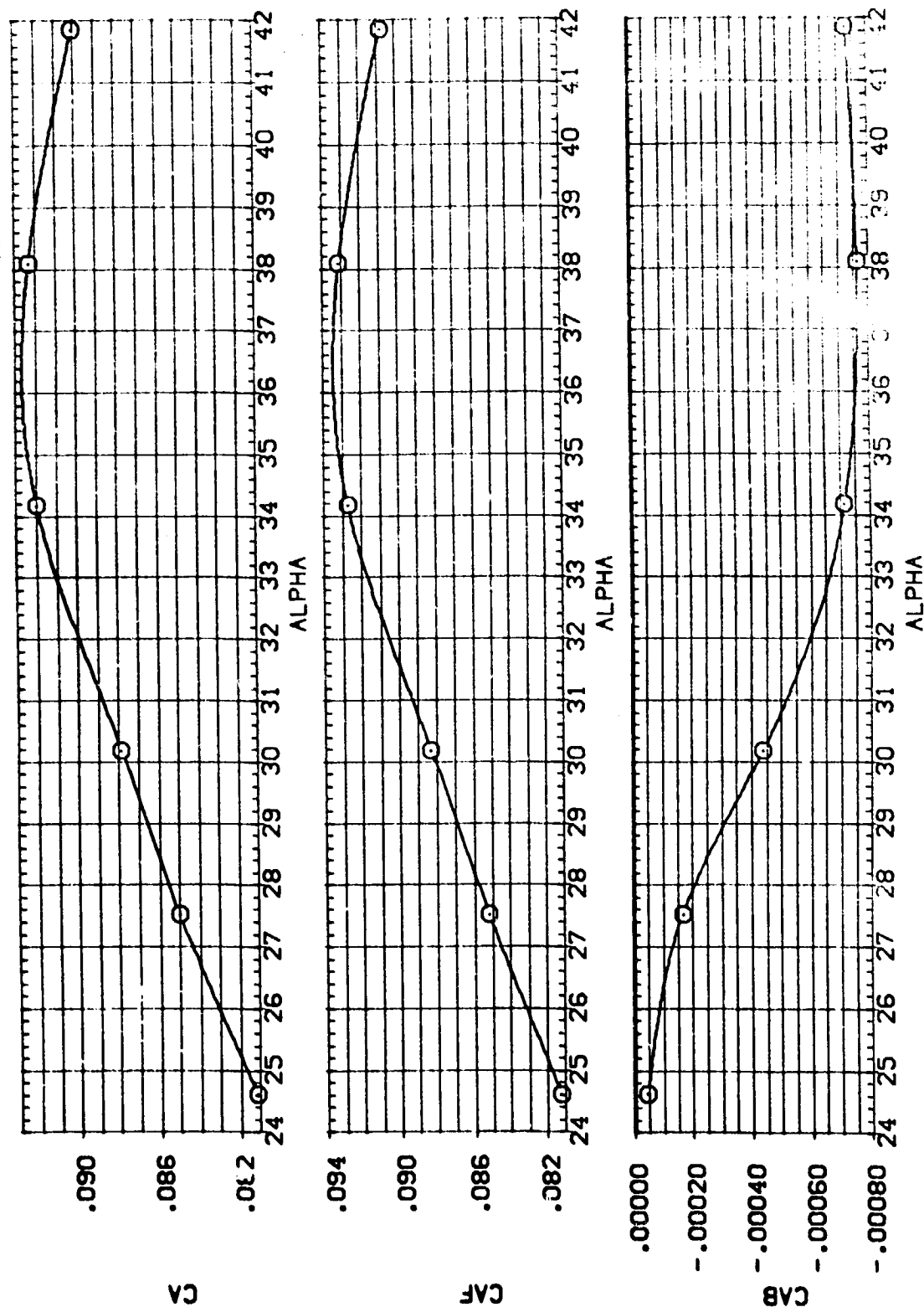


FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL (88X037) ○ CONFIGURATION DESCRIPTION AVES 2.5-160 DA118 (B10F4C507GN8)(V87E18)(V5R5)

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.1800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

ELEVON RUDDER SPDBAK BDFLAP
 .000 .000 .000 .000

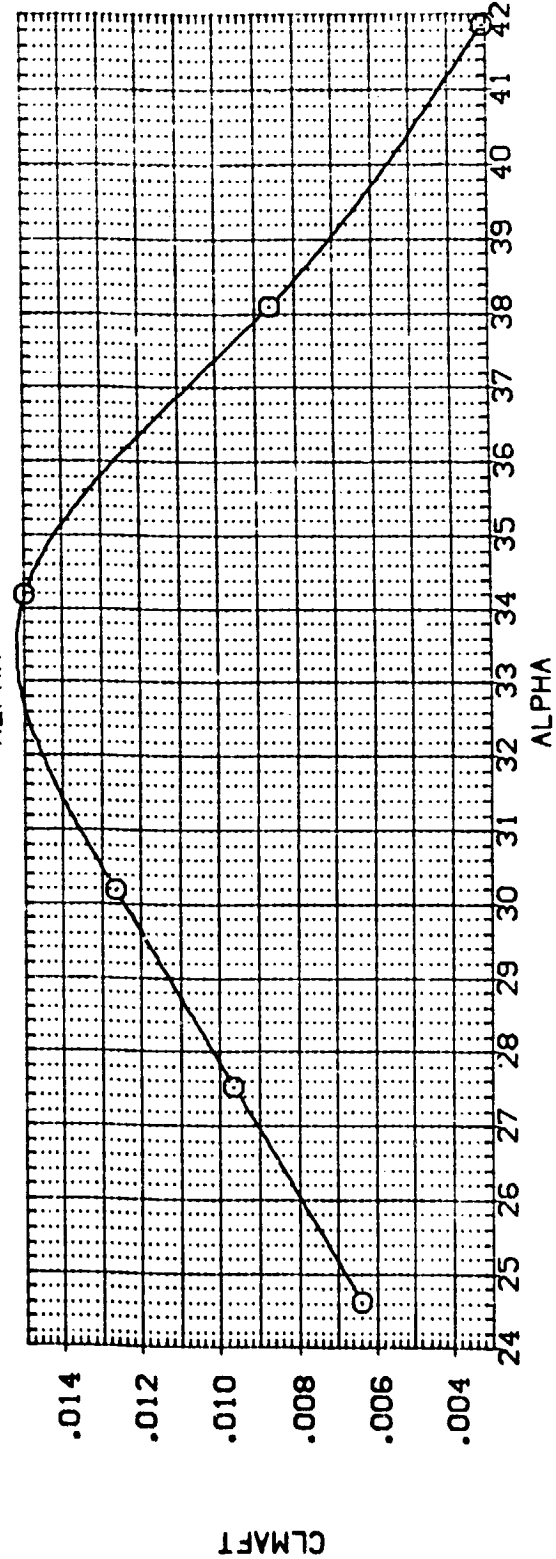
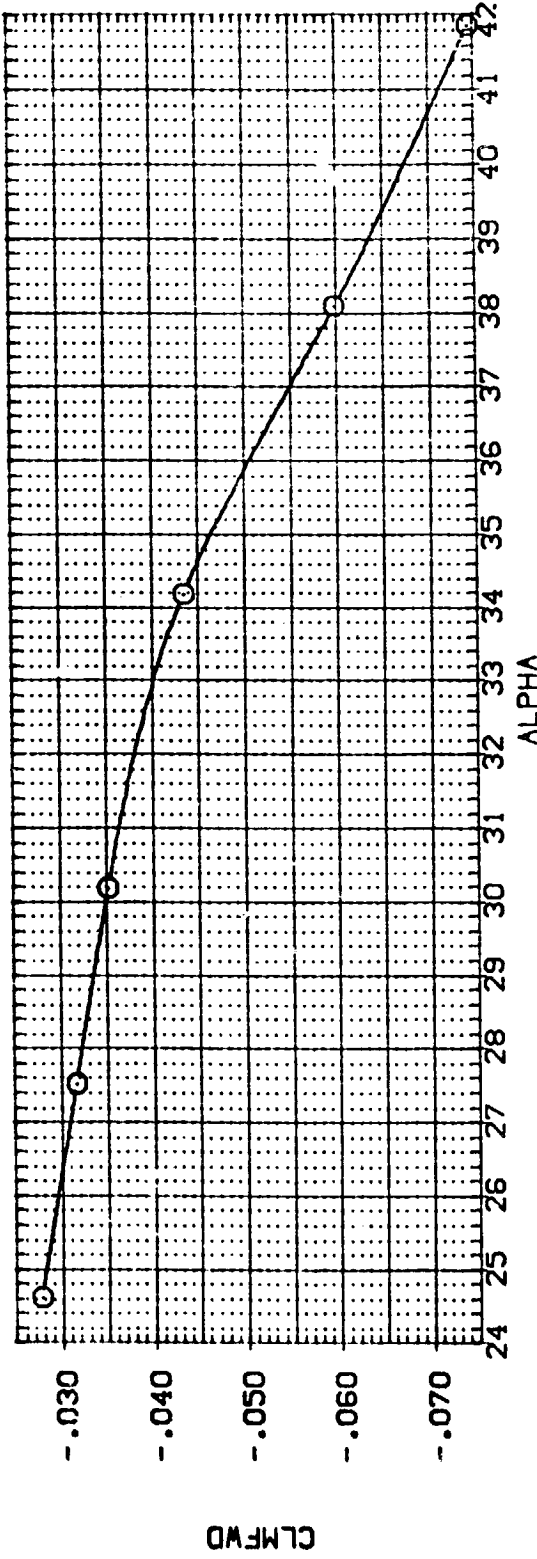


FIG. 4.8.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL (BB0037) ○ CONFIGURATION DESCRIPTION ARES 3.5-160 CA118 (B10F4C507H308)(V87E18)(V5R5) REFERENCE INFORMATION SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 936.6800 IN. YMRP 1076.4800 IN. ZMRP 400.0000 IN. SCALE 0.150

ELEVON .000 RUDDER .000 SPOILER 54.920 BOFLAP .000

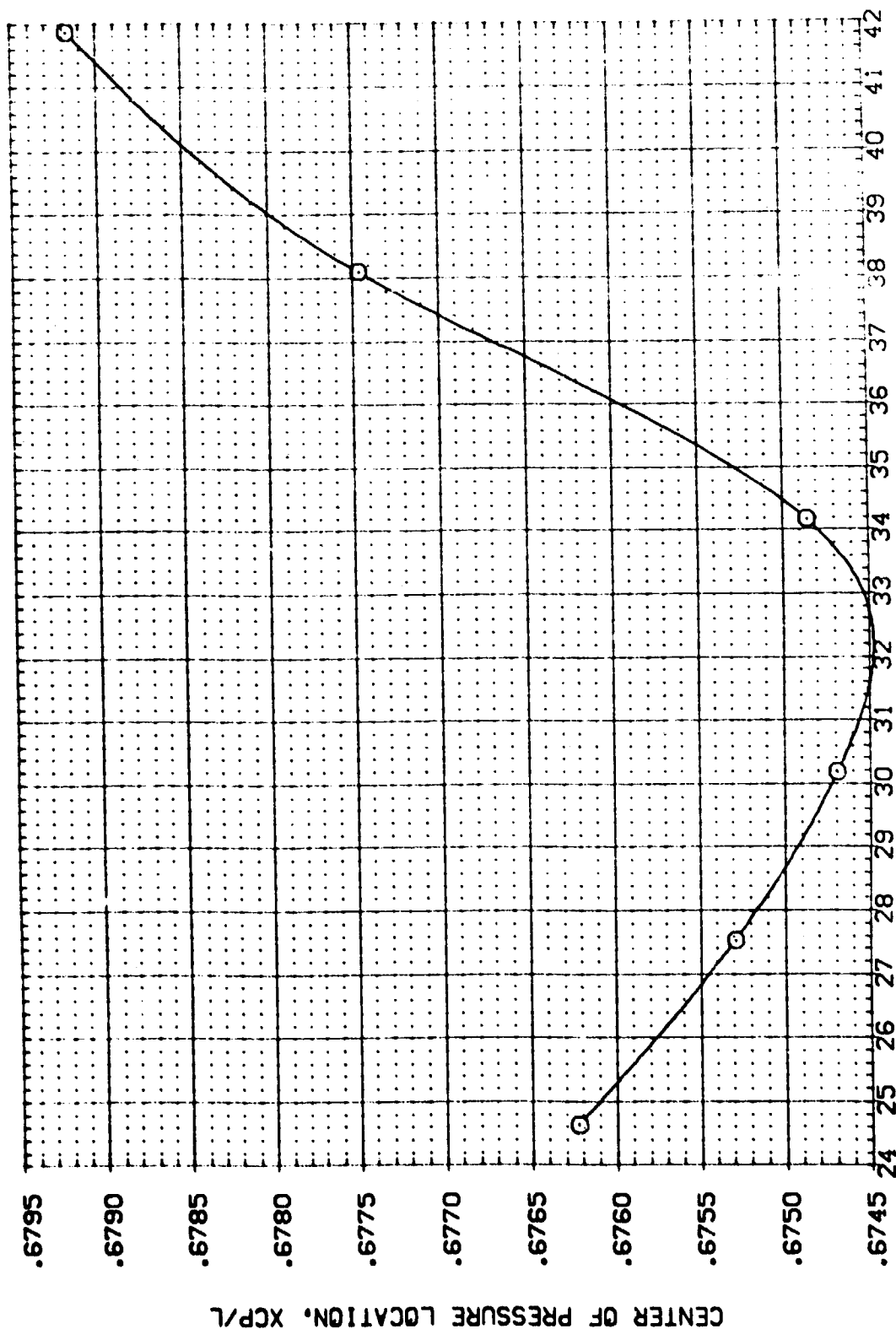


FIG. 4.8.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A) MACH = 10.29



DATA SET SYMBOL: (BB0037) ○ CONFIGURATION DESCRIPTION: ARES 3.5-180 0A118 (B10FAC50703-8)(V87E181)(V5K5)

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LSREF	474.8100 IN.
BSREF	936.6800 IN.
XMRP	1076.4800 IN.
YMRP	.0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

ELEVON	RUDER	SPORRK	BDFLAP
.000	.000	54.920	.000

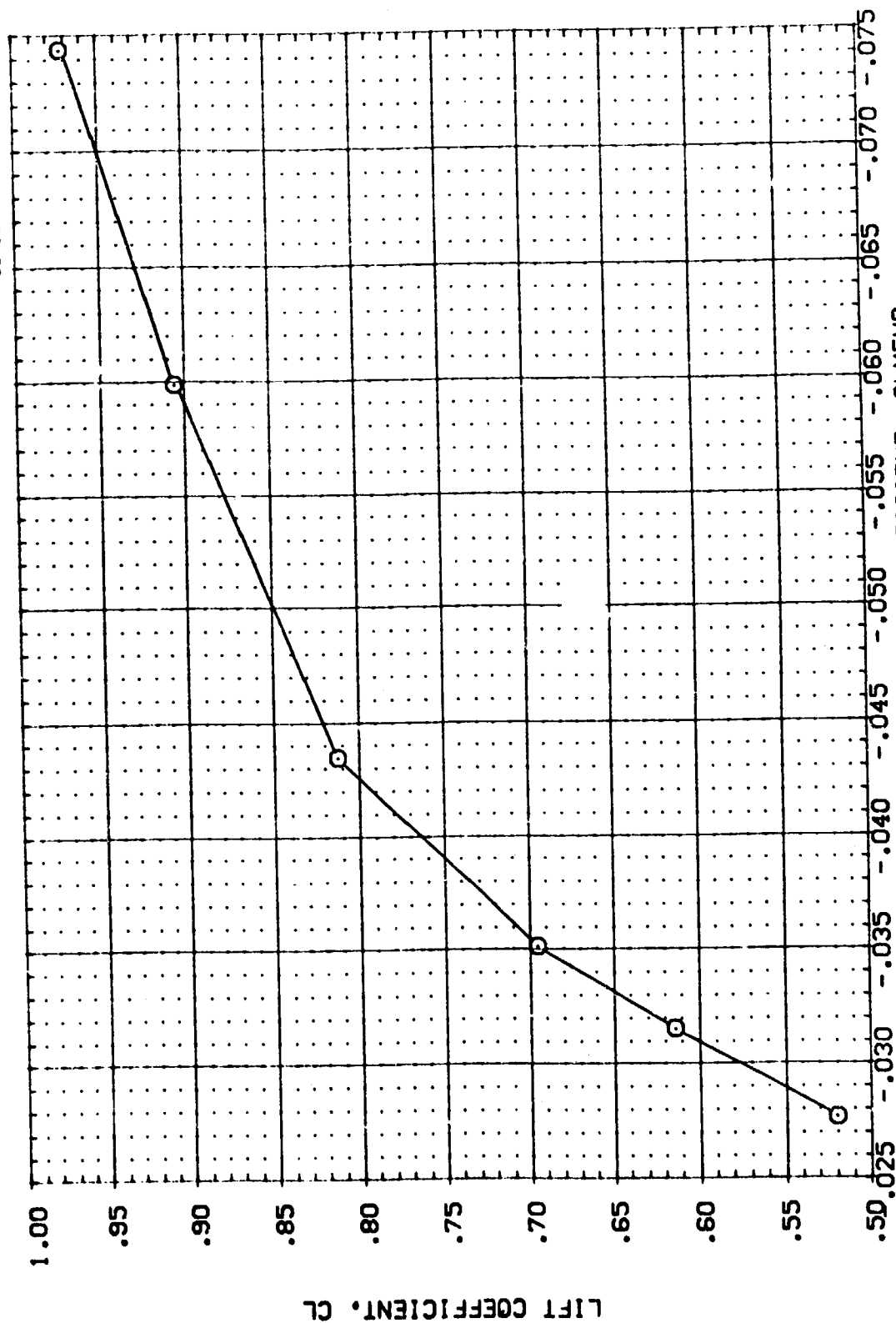


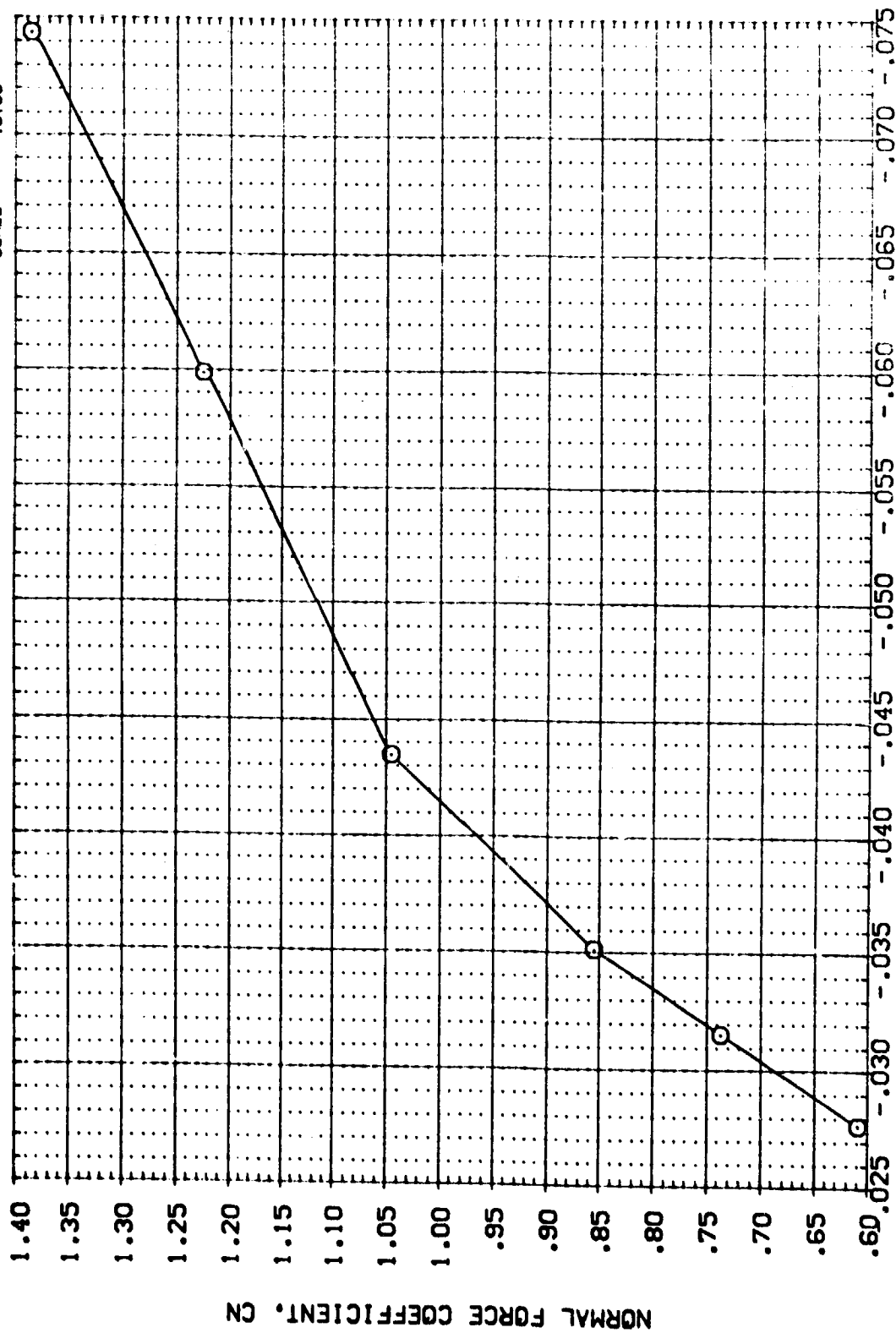
FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMB. CONFIGURATION DESCRIPTION
(BB0037) O AVE 3.5-160 OA118 (B10F4C507M3-8)(V67E18)(V595)

ELEVON RUDDER SPOILER BOFLAP
.000 .000 .000 .000

REFERENCE INFORMATION
SREF 2690.0000 50.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XREF 1076.4800 IN.
YREF 0.0000 IN.
ZREF 400.0000 IN.
SCALE 0.150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW()

FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL (880037) ○ CONF:GLRATON DESCRIPTION
AVES 3 5-160 0A11B (B10F4C507H348)(V87E18)(V5R5)

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
BREF	936.6800 IN.
XMRP	1076.4800 IN.
YMRP	.0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

ELEVON	RUDDER	SPDBRK	BOFLAP
.000	.000	54.920	.000

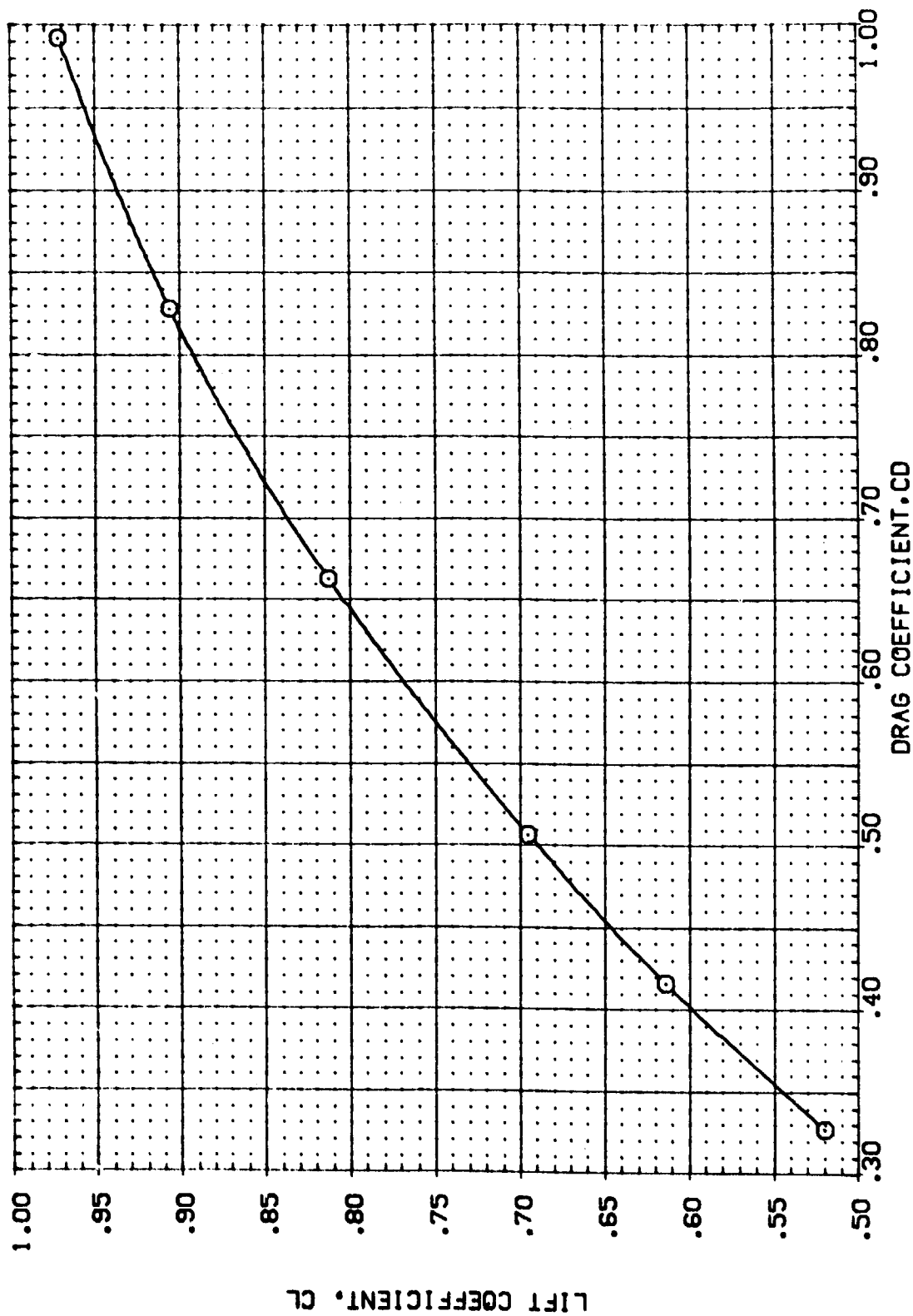


FIG. 4.B.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29

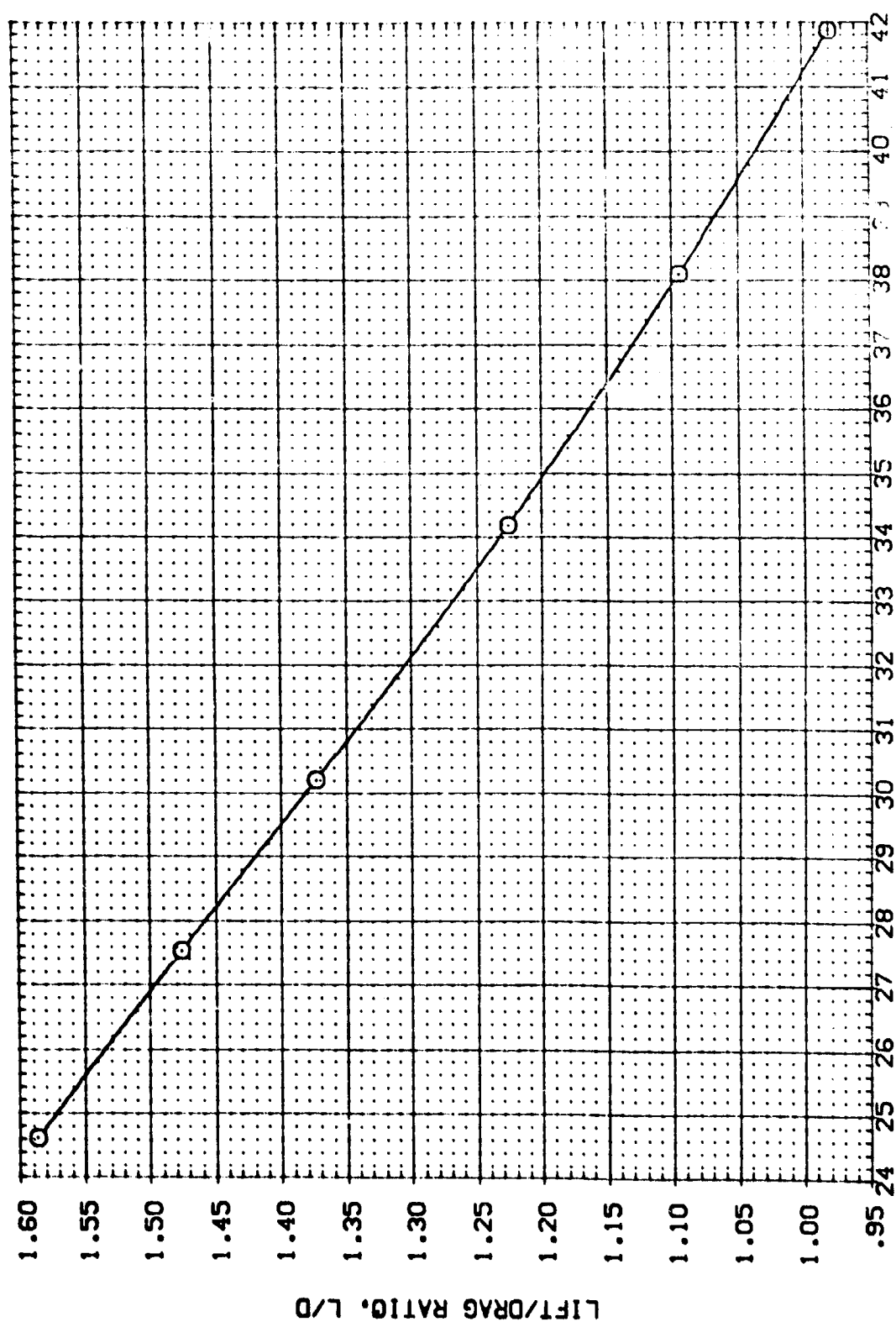
DATA SET SYMBOL CONFIGURATION DESCRIPTION REFERENCE INFORMATION

(AB037) O ARES 3.5-160 DA11B (B10F4C507M3G4)(V87E18)(VSR5)

SREF	2690.0000	SO.FT.
LREF	474.8100	IN.
BREF	536.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

ELEVON RUDDER SPOILER BOFLAP

.000 .000 54.920 .000



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.8.3 MACH 10.29 UNDEFLECTED BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL (BB064) ○ CONFIGURATION DESCRIPTION ARES 3.5-160 OA118 (B10F4C507H318)(V67E18)(V5R5)

REFERENCE INFORMATION	
SREF	2690.0000 SQ.FT.
LREF	474.8100 IN.
EREF	936.6800 IN.
XPRP	1076.4800 IN.
YPRP	400.0000 IN.
ZPRP	400.0000 IN.
SCALE	.0150

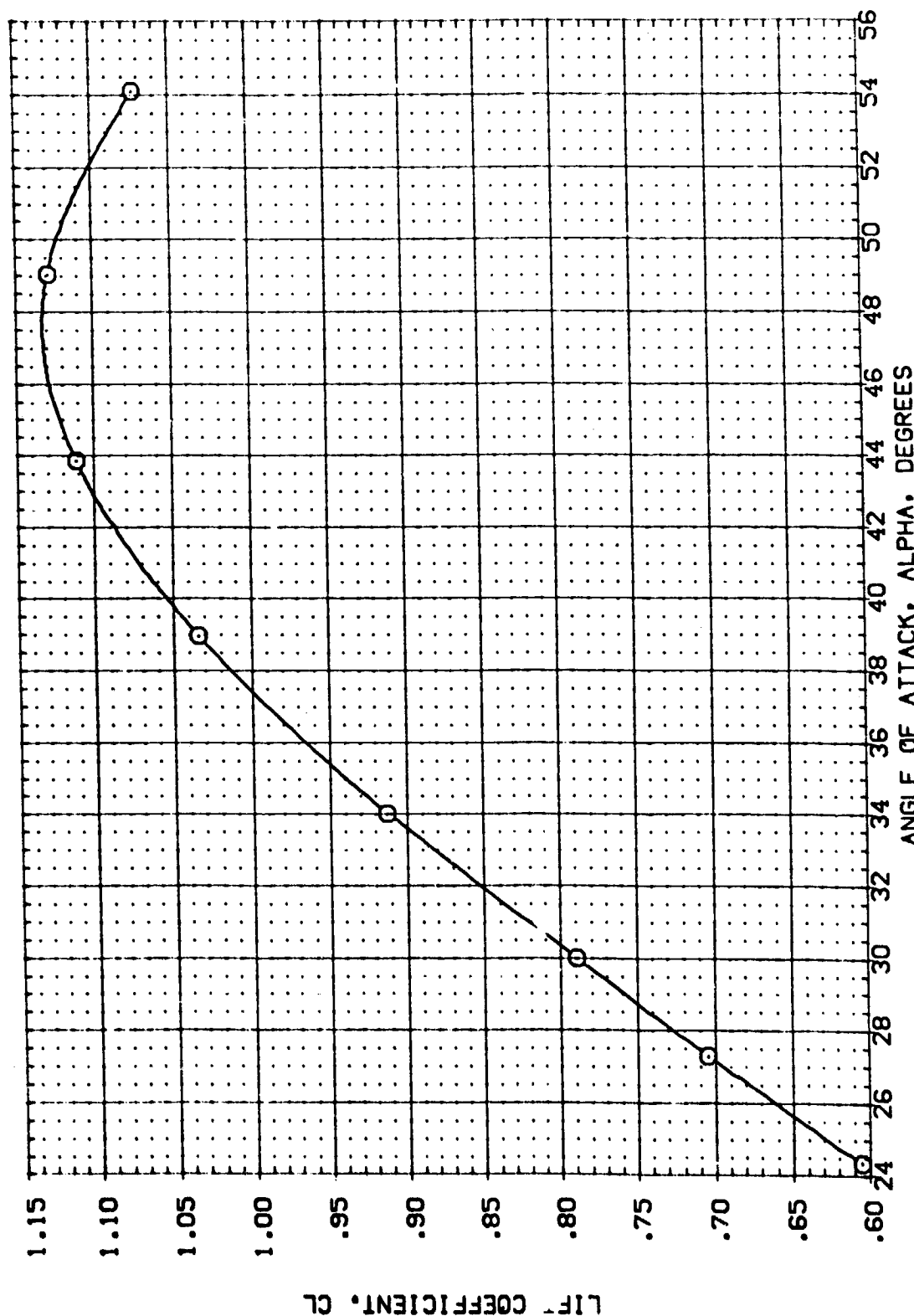


FIG. 4.C.1 MACH 5.26. 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (BB0064) \bigcirc CONFIGURATION DESCRIPTION: ARES 3.5-160 OA11B (810F4C507M3G48)(V87E18)(V59F5)

ELEVON	RUDDER	SPOILER	BODYFLAP	REFERENCE INFORMATION	
.000	.000	54.920	13.750	SREF	2690.0000
				LREF	474.8100
				BREF	936.6800
				XTRP	1076.4800
				YTRP	400.0000
				ZTRP	400.0000
				SCALE	.0150

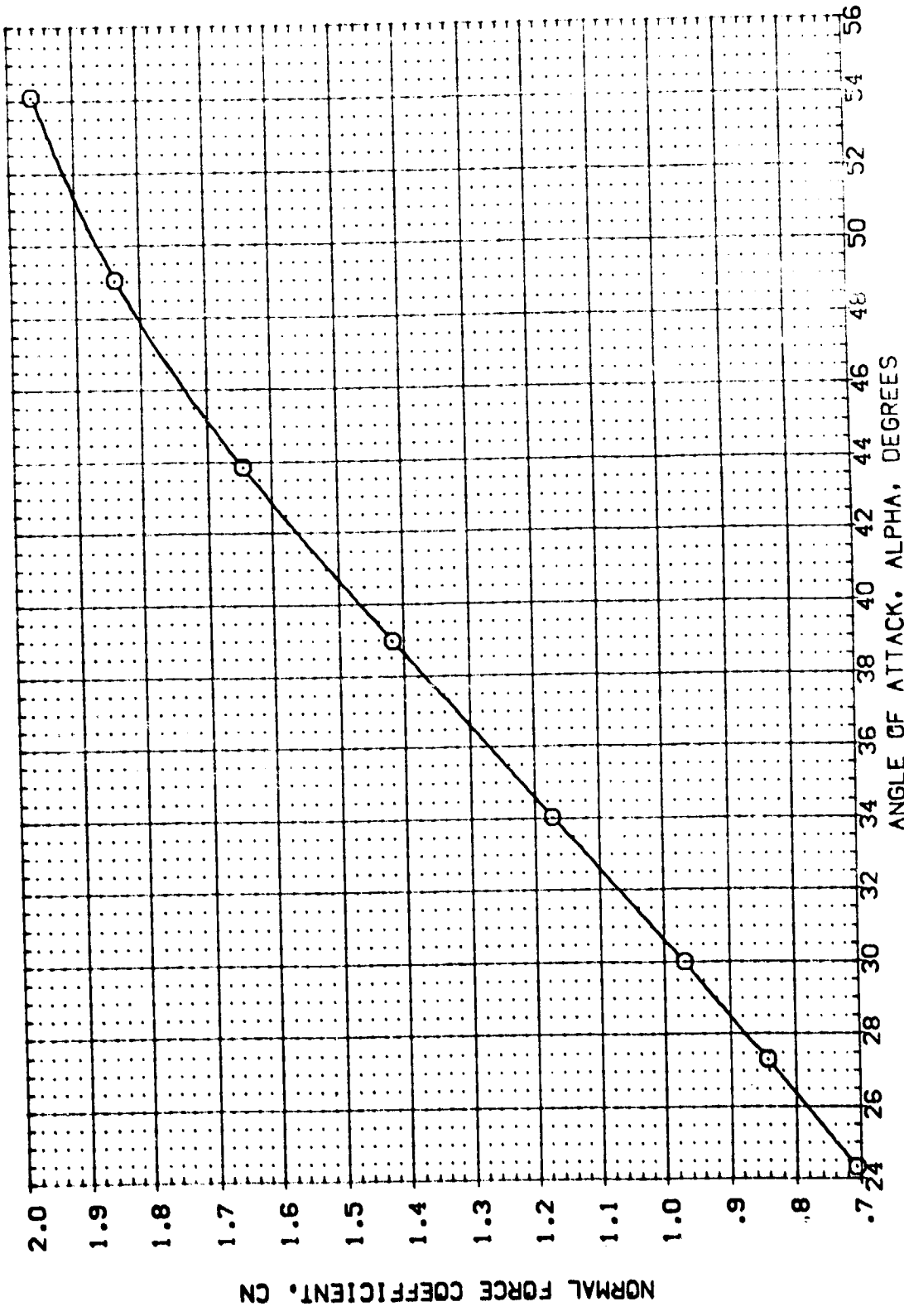


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 5.26



DATA SET SYMBOL (B00064) \bigcirc AVES 3.5-160 CA118 (810F4C5D7H3G8)(V87E18)(V59S5)

CONFIGURATION DESCRIPTION

ELEVON .000 RUDDER .000 SPOBRK 54.920 BDFLAP 13.750

REFERENCE INFORMATION

SREF 2690.0000 SQ.FT. IN.

LREF 474.8100 IN.

BREF 936.6800 IN.

XMRP 1076.4800 IN.

YMRP .0000 IN.

ZMRP 400.0000 IN.

SCALE .0150

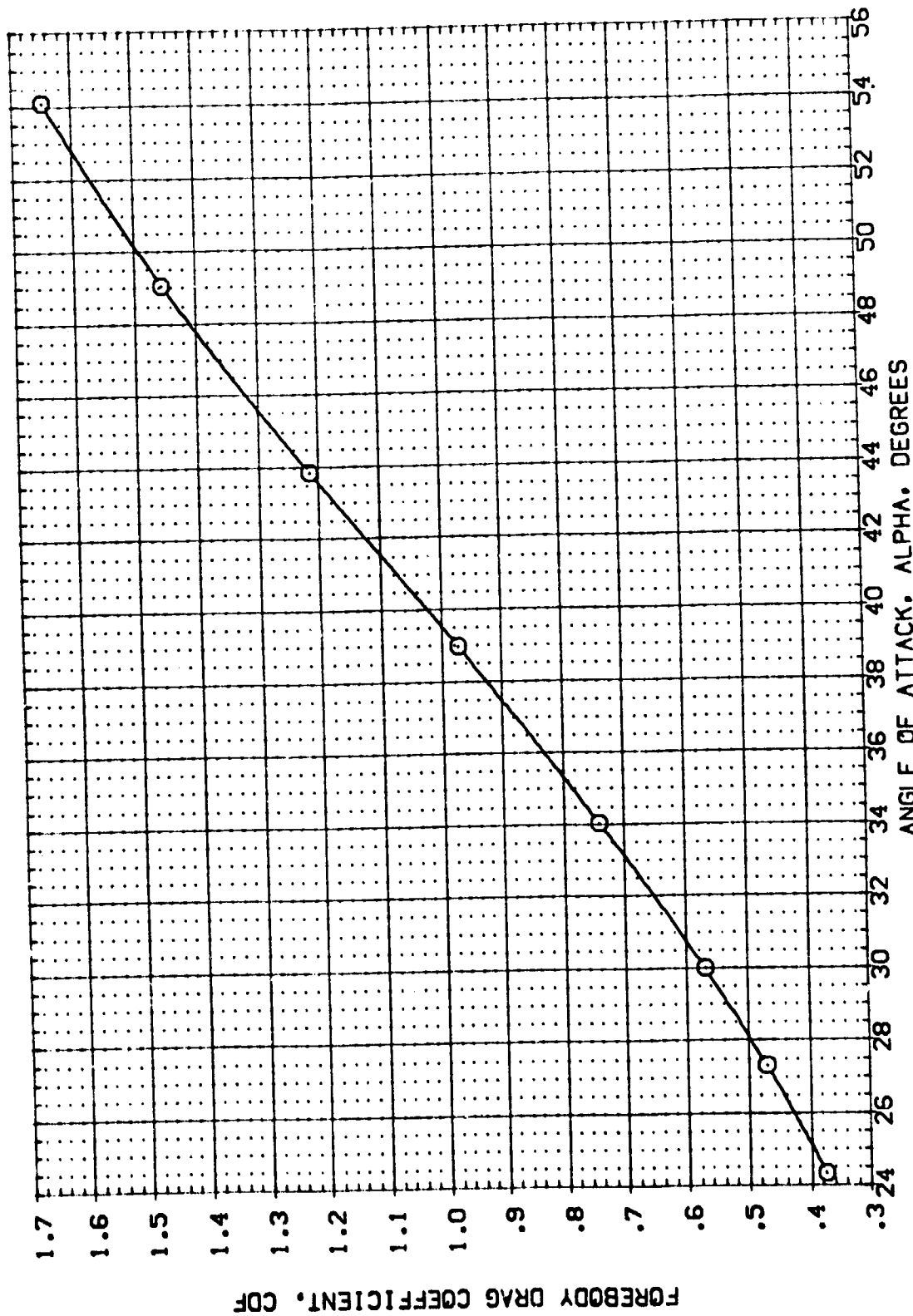


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL ○ CONFIGURATION DESCRIPTION AVES 3.5-160 0A118 (810F4C507AG-8)(V87E18)(V595)

ELEVON .000 RUDDER .000 SPEED OF FLAP 54.920 BO FLAP 13.750

REFERENCE INFORMATION

	IN.	SO. FT.
SREF	2690.0000	
LREF	474.5100	
BREF	936.8900	
XMRP	1076.4800	
YMRP	.0000	
ZMRP	400.0000	
SCALE	.0150	

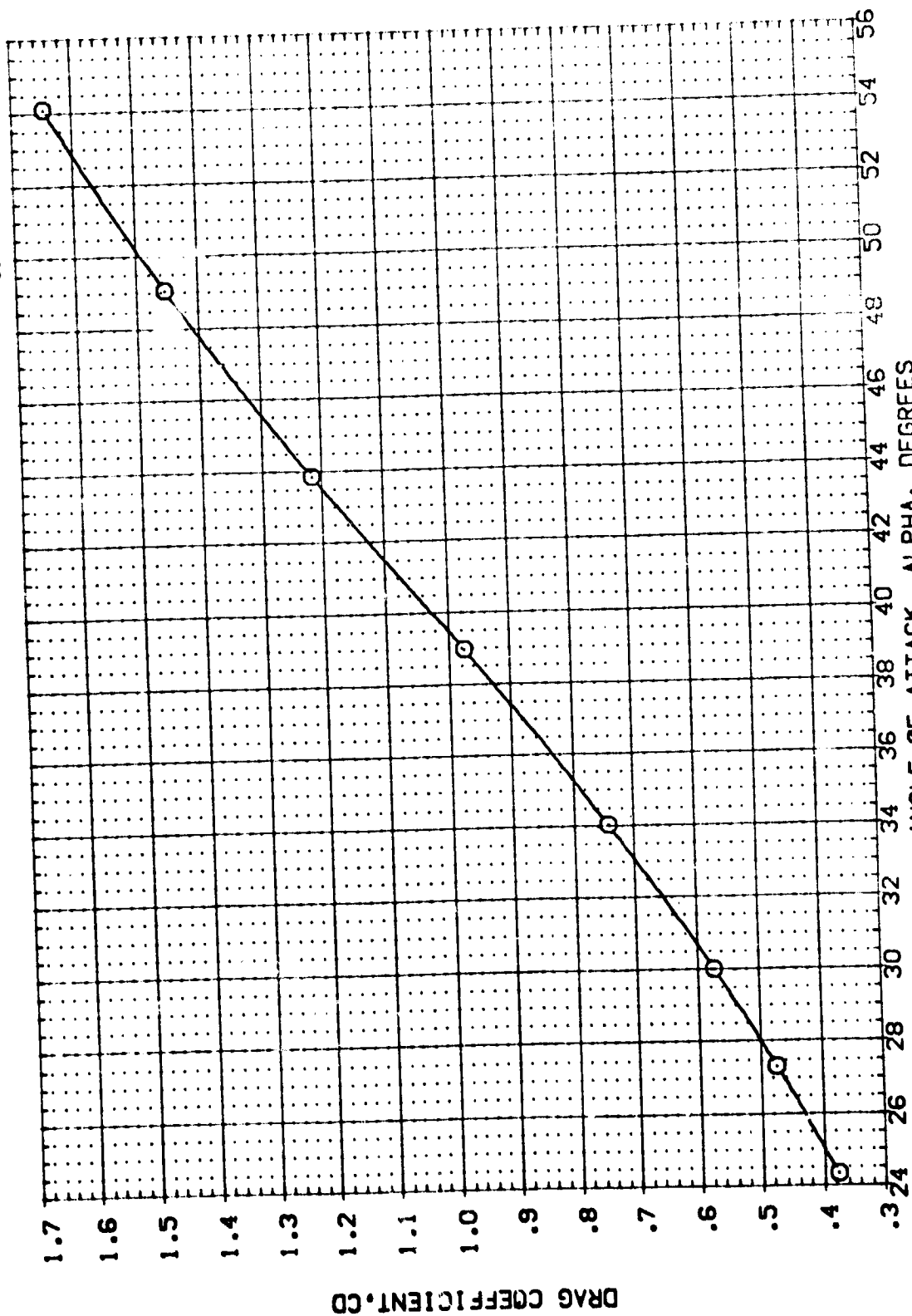


FIG. 4.C.1 MACH 5.26. 13.75 DEGREE BODYFLAP EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL: CONFIGURATION DESCRIPTION
 (BBX054) ○ ARES 3.5-1.60 CALIB (B10F4C5071318)(V87E18)(VSR5)

ELEVON RUDDER SPDBRK BOFLAP
 .000 .000 54.920 13.750

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

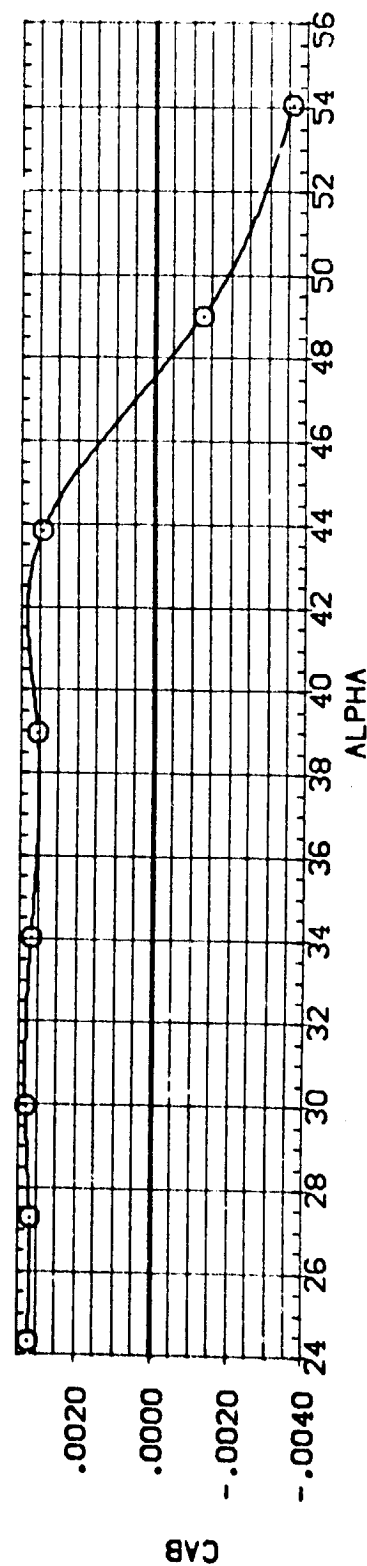
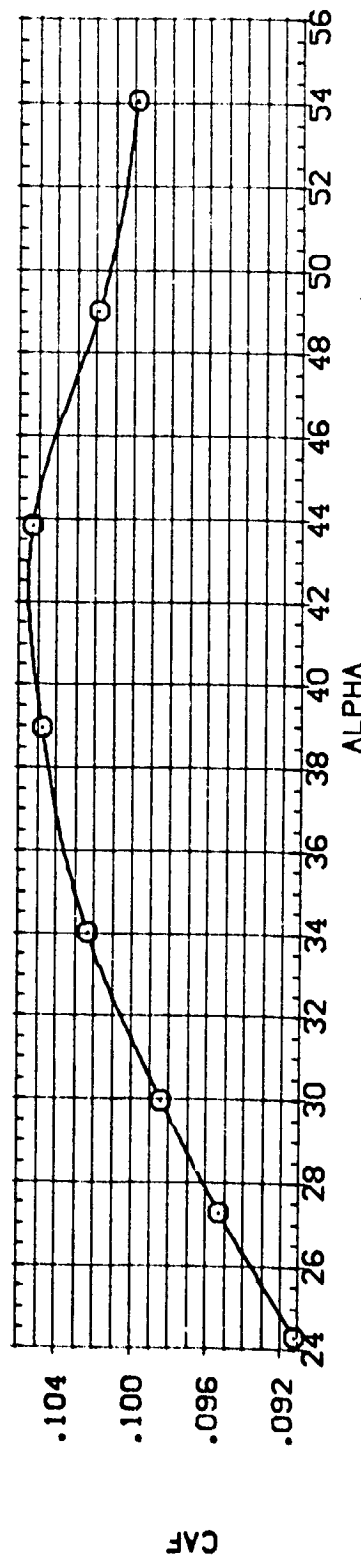
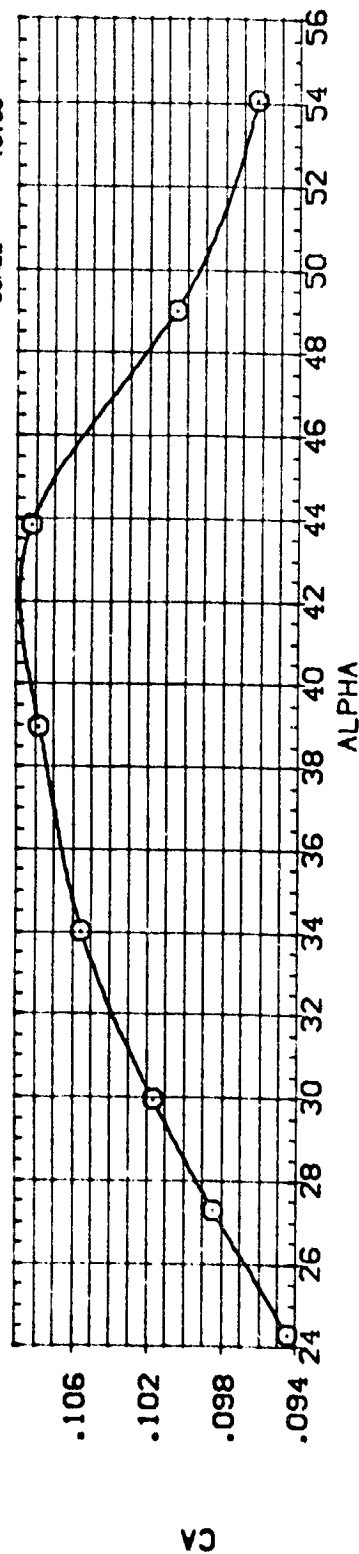


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(CA)MACH = 5.26

DATA SET SYMBOL (BB0064) ○ CONFIGURATION DESCRIPTION ARES 3.5-160 DALLB (B10F4C507KGN8)(V87E18)(VSR5)

ELEVON RUDDER SPDBRK BOFLAP

.000 .000 54.920 13.750

REFERENCE INFORMATION

SREF 2690.0000 50.FT.

LREF 474.8100 IN.

BREF 936.6800 IN.

XMRP 1076.4800 IN.

YMRP 400.0000 IN.

ZMRP 400.0000 IN.

SCALE .0150

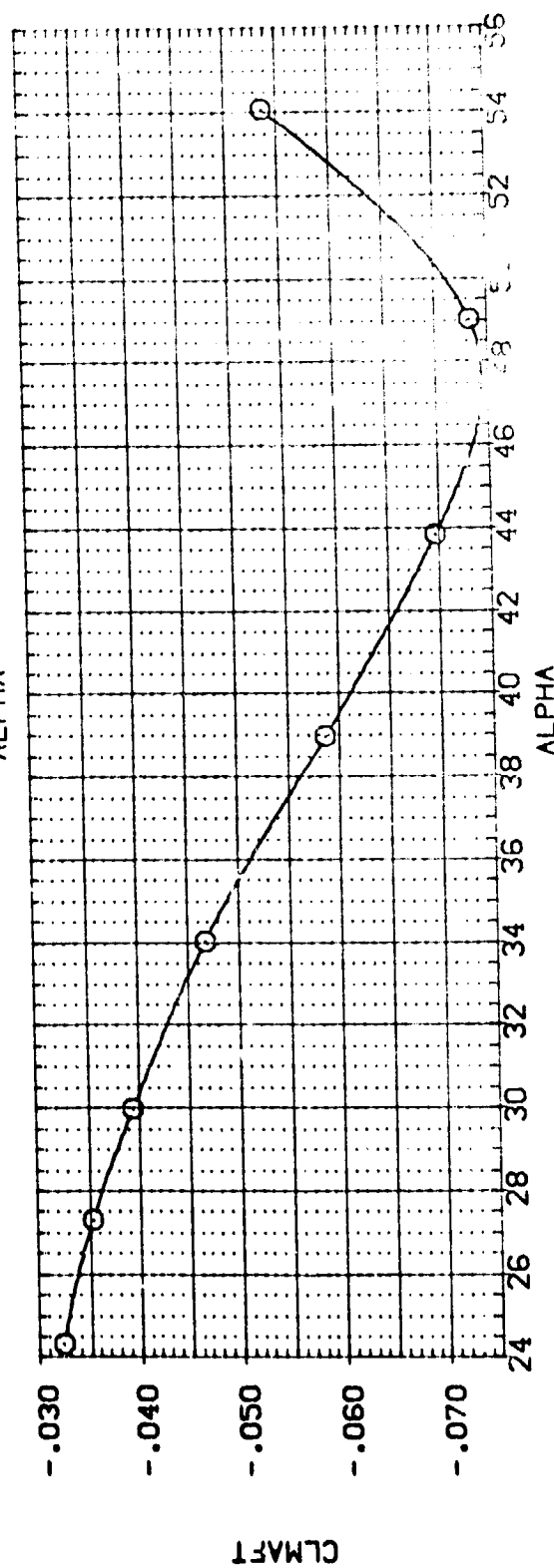
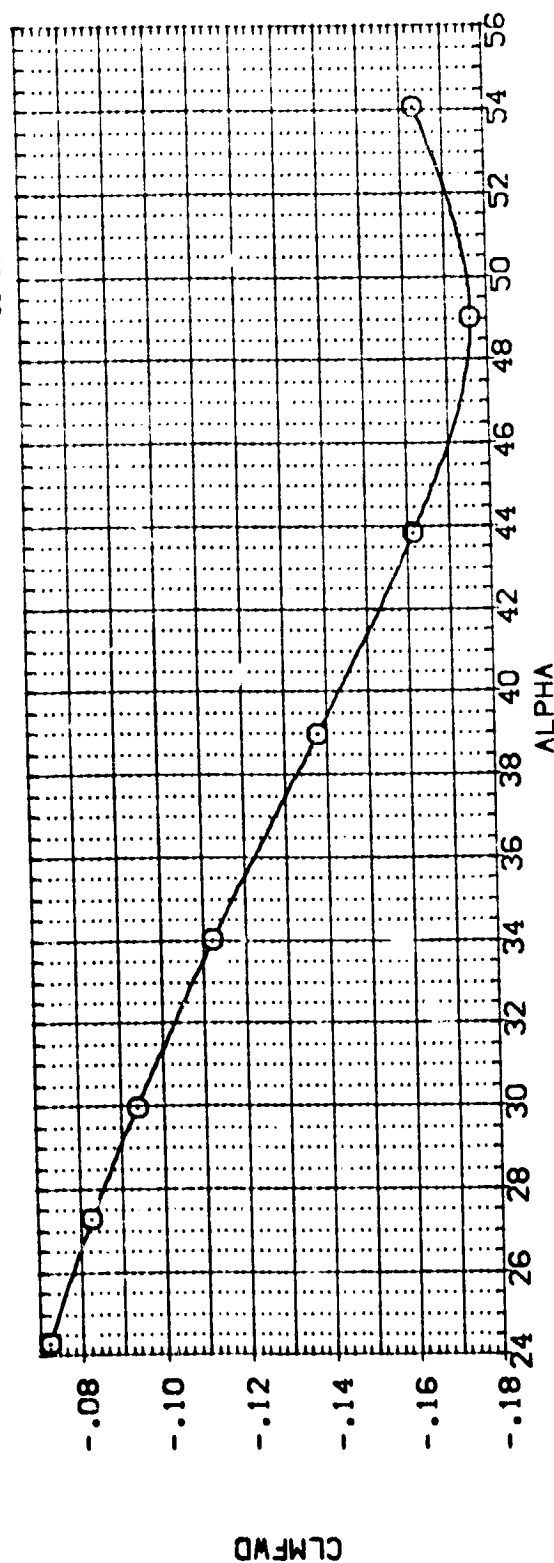


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

ΛMACH = 5.26



DATA SET SYMBOL: (BBX064) \bigcirc CONFIGURATION DESCRIPTION: AYES 3 5-150 0A11B (8134C507H3-8)(V87E18)(V54S5)

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 BODYFLAP: 13.750

REFERENCE INFORMATION:

SREF	2690.0000	SO.FT.
LREF	174.8100	IN.
BREF	936.6300	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

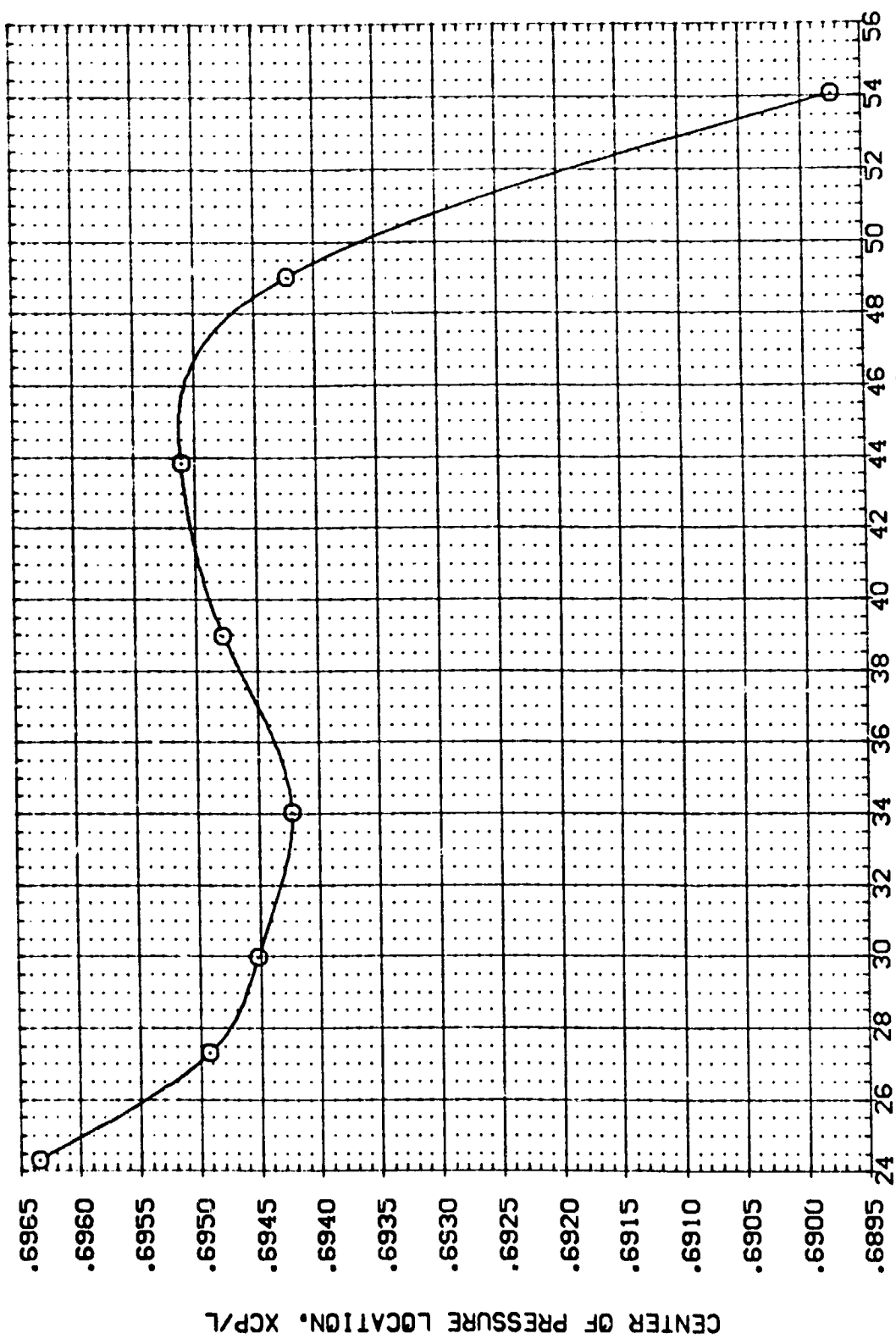


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BB0064)	AVES 3.5-160 CA118 (B10F4C507K3N8)(V87E18)(V5R5)	.000	.000	54.970	13.750	SREF 2690.0000 50.FT.
						LREF 474.8100 IN.
						BREF 936.6800 IN.
						XPRP 1076.4800 IN.
						YPRP 400.0000 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

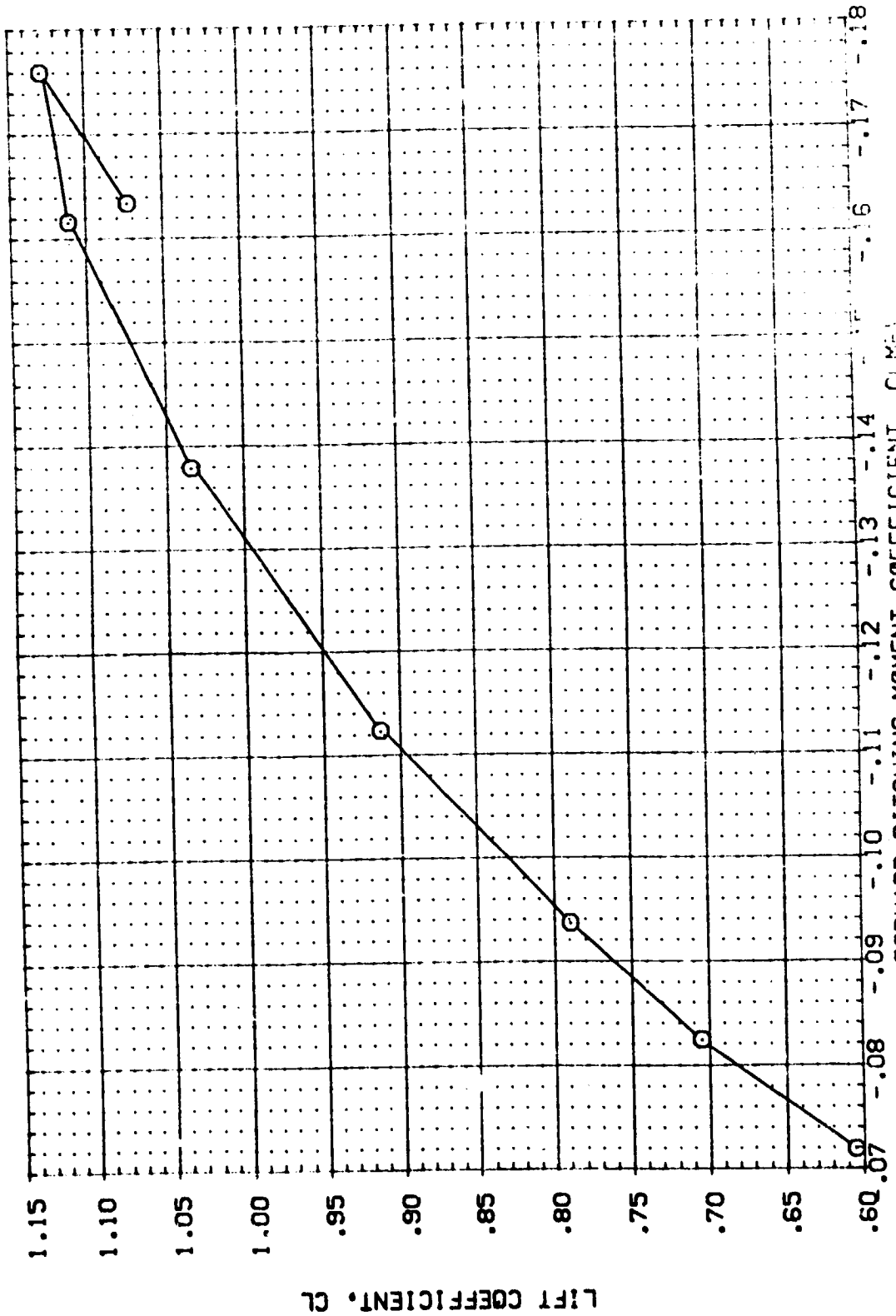


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A) MACH = 5.26

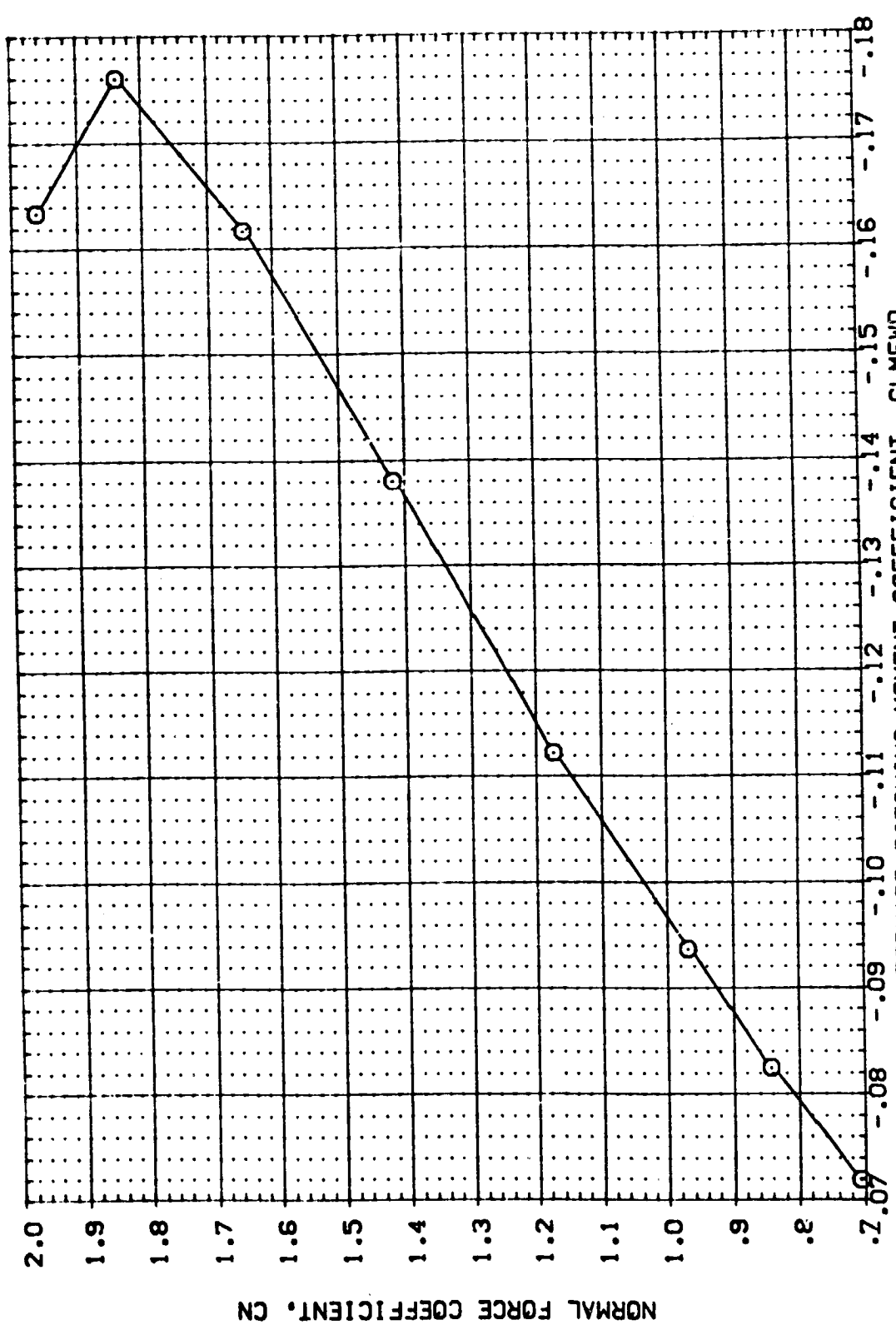


DATA SET SYMBOL: (BB0064) ○ CONFIGURATION DESCRIPTION: ARES 3.5-160 CA11B (810F4C507H348)(V87E18)(V595)

ELEVON: .000 RUDDER: .000 SPOILER: 54.920 BOFLAP: 13.750

REFERENCE INFORMATION:

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (880064) CONFIGURATION DESCRIPTION: ARES 3.5-160 0A118 (B10F4CSD7MGN8)(V87E18)(V5R5)

REFERENCE INFORMATION:

SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	400.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

ELEVON: .000 RUDDER: .000 SPIDERS: 54.920 BODYFLAP: 13.750

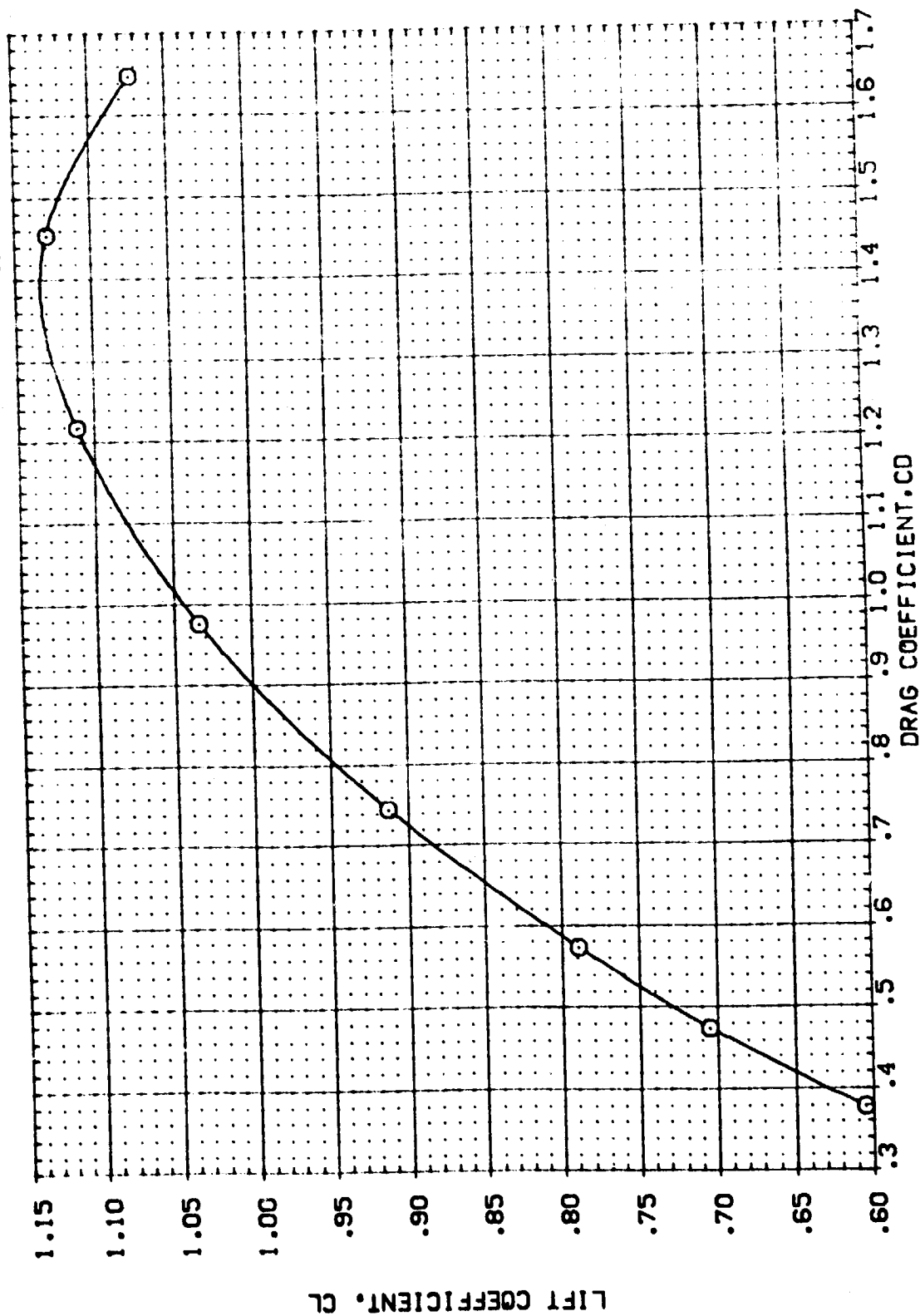


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL: (ABX064) ○ ARES 3.5-160 CALIB (810F4C507KQ4B)(V67E18)(V5P5)

CONFIGURATION DESCRIPTION: ELEVON .000 RUDDER .000 SPORK 54.920 BODYFLAP 13.750

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 936.6800 IN. XMRP 1075.4800 IN. YMRP .0000 IN. ZMRP 400.0000 IN. SCALE .0150

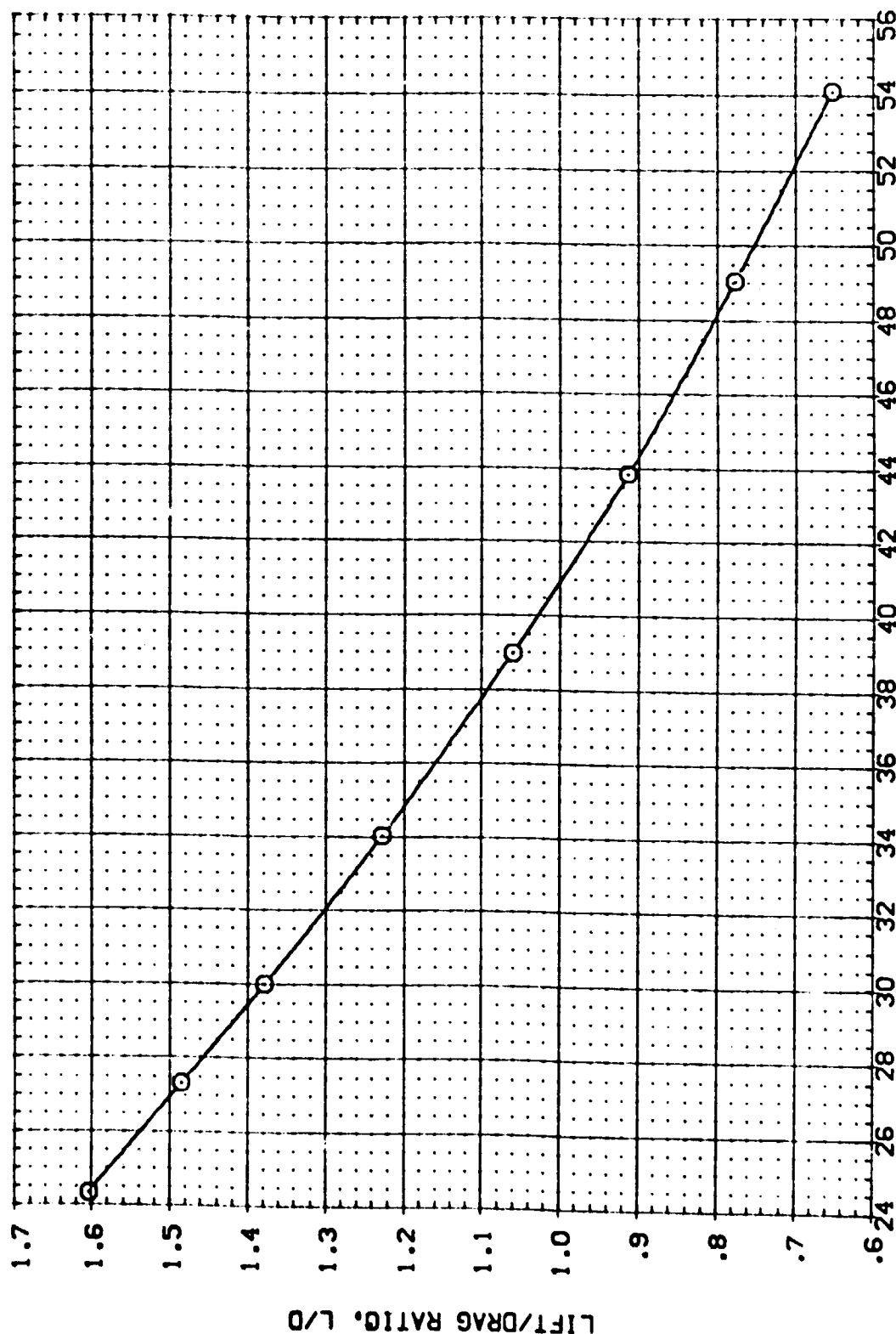


FIG. 4.C.1 MACH 5.26, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BB0013)	AVES 3.5-160 DA11B (B1D4C507M3-8)(V67E1B)(V5K5)	.000	.000	54.920	13.750	SREF 2690.0000 SO.FT.
(BB0032)	AVES 3.5-160 DA11B (B1D4C507M3-8)(V67E1B)(V5K5)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(BB0054)	AVES 3.5-160 DA11B (B1D4C507M3-8)(V67E1B)(V5K5)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(BB0055)	AVES 3.5-160 DA11B (B1D4C507M3-8)(V67E1B)(V5K5)	.000	.000	54.920	13.750	XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

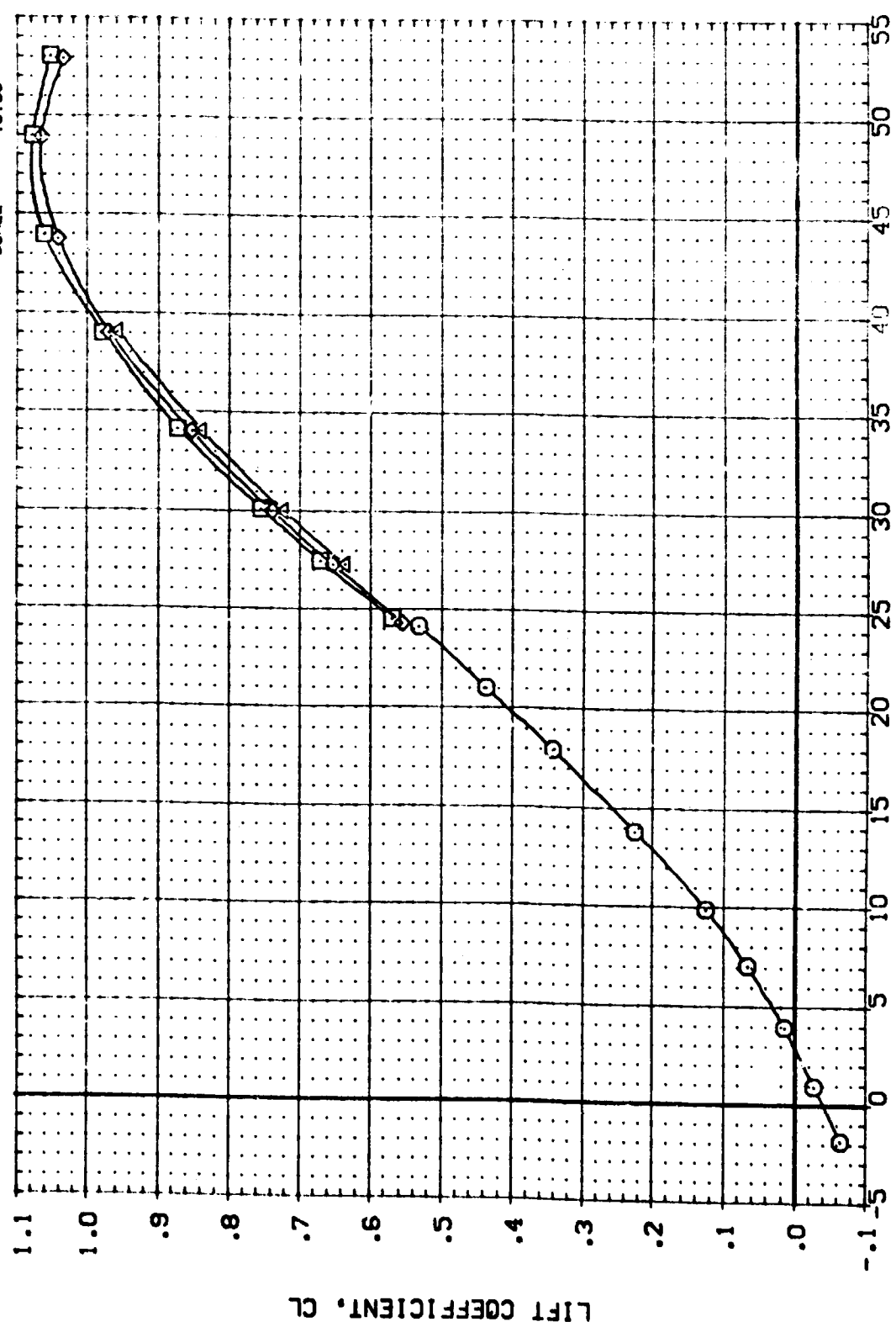


FIG. 4.C.2 MACH 7.32. 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BODYFLAP	REFERENCE INFORMATION
(BBX013)	AVES 3.5-160 OA11R (B10F4C507M3-8)(V87E18)(V59S)	.000	.000	54.920	13.750	SREF 2690.0000 SO.FT. IN.
(BBX032)	AVES 3.5-160 OA11R (B10F4C507M3-8)(V87E18)(V59S)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(BBX054)	AVES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V59S)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(BBX055)	AVES 3.5-160 OA11B (B10F4C507M3-8)(V87E18)(V59S)	.000	.000	54.920	13.750	XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

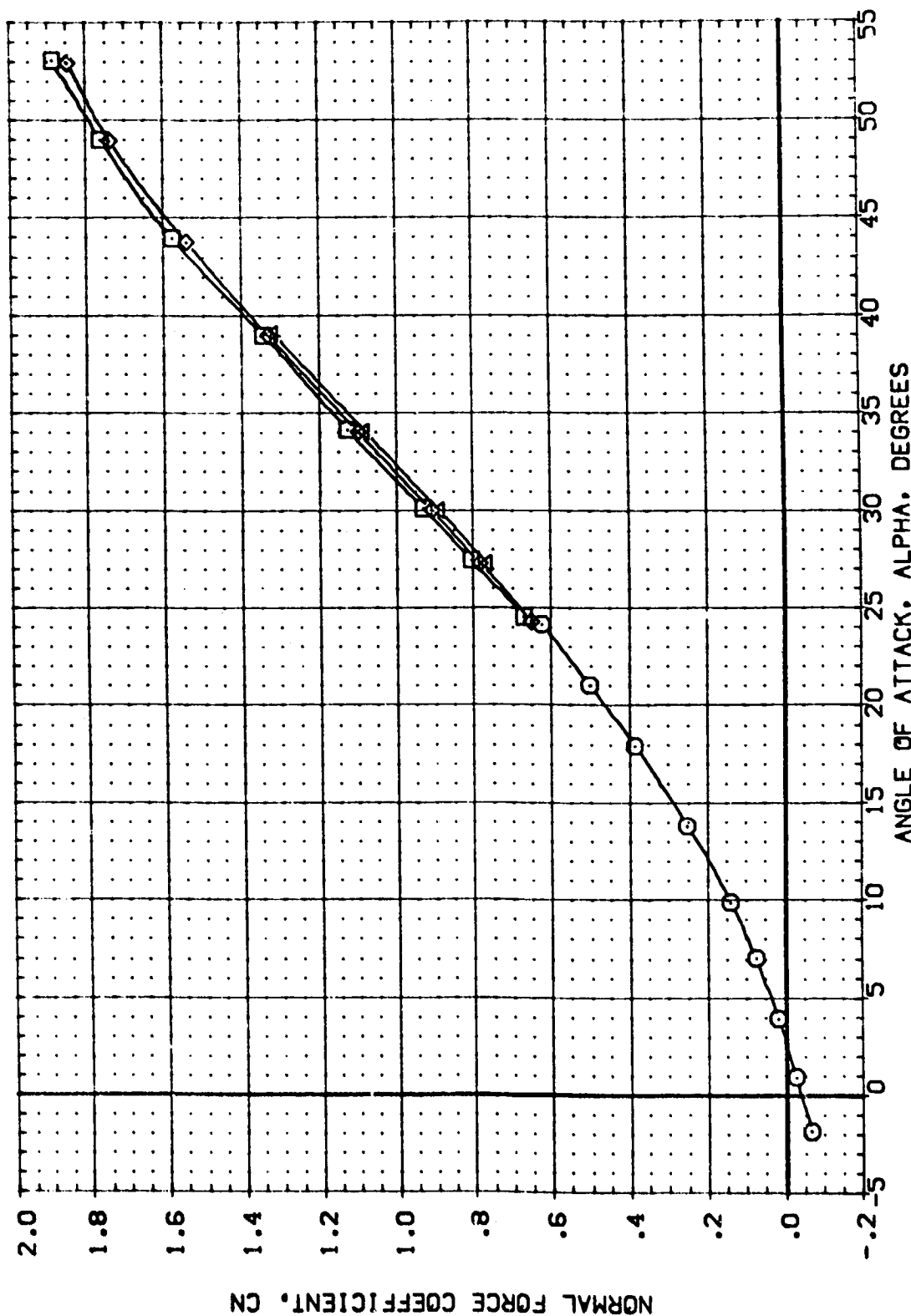


FIG. 4.C.2 MACH 7.32. 13.75 DEGREE BODYFLAP EFFECTS

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BDFLAP	REFERENCE INFORMATION
(BBX013)	AVES 3.5-160 DAI18 (B1D-4C507N3-B)(V87E18)(V585)	.000	.000	54.920	13.750	SREF 2690.0000 50.FT.
(BBX032)	AVES 3.5-160 DAI18 (B1D-4C507N3-B)(V87E18)(V585)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(BBX054)	AVES 3.5-160 DAI18 (B1D-4C507N3-B)(V87E18)(V585)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(BBX055)	AVES 3.5-160 DAI18 (B1D-4C507N3-B)(V87E18)(V585)	.000	.000	54.920	13.750	XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

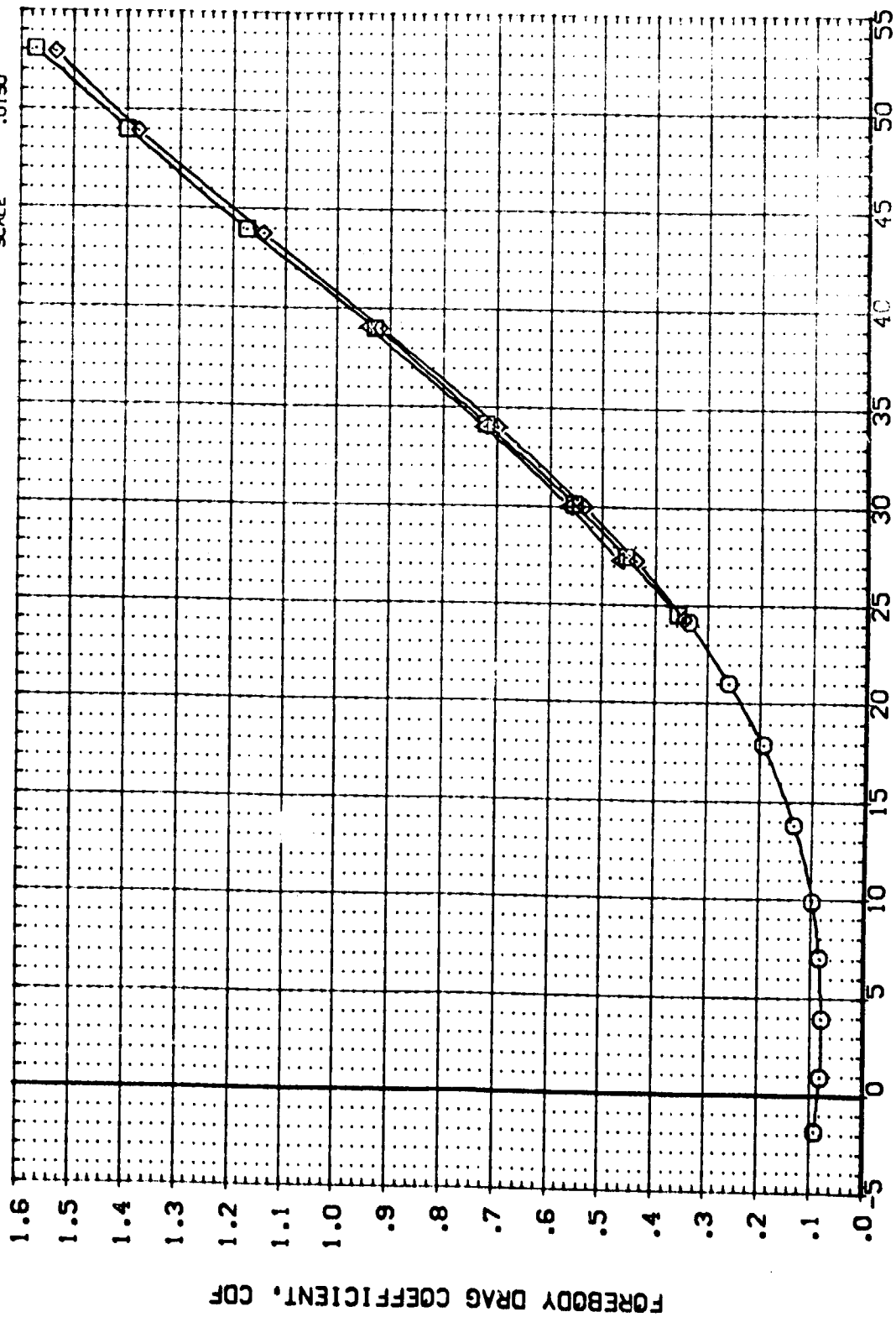


FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(58X013)	AVES 3.5-160 CA11B (B1D4C507H348)(V67E18)(V59S)	.000	.000	54.920	13.750	STEF 2690.0000 SO.FT. IN.
(58X032)	AVES 3.5-160 CA11B (B1D4C507H348)(V67E18)(V59S)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(58X054)	AVES 3.5-160 CA11B (B1D4C507H348)(V67E18)(V59S)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(58X055)	AVES 3.5-160 CA11B (B1D4C507H348)(V67E18)(V59S)	.000	.000	54.920	13.750	XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

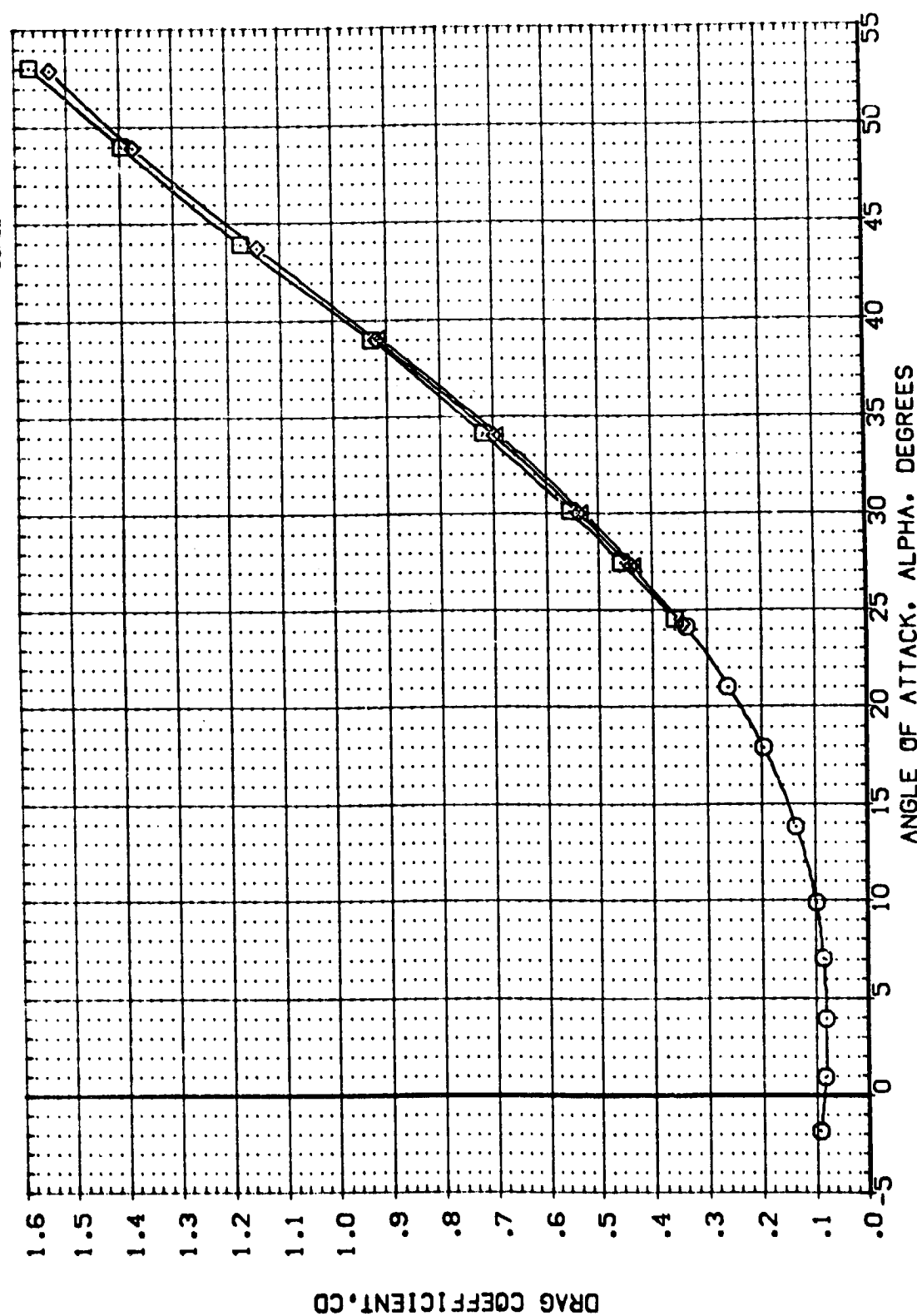
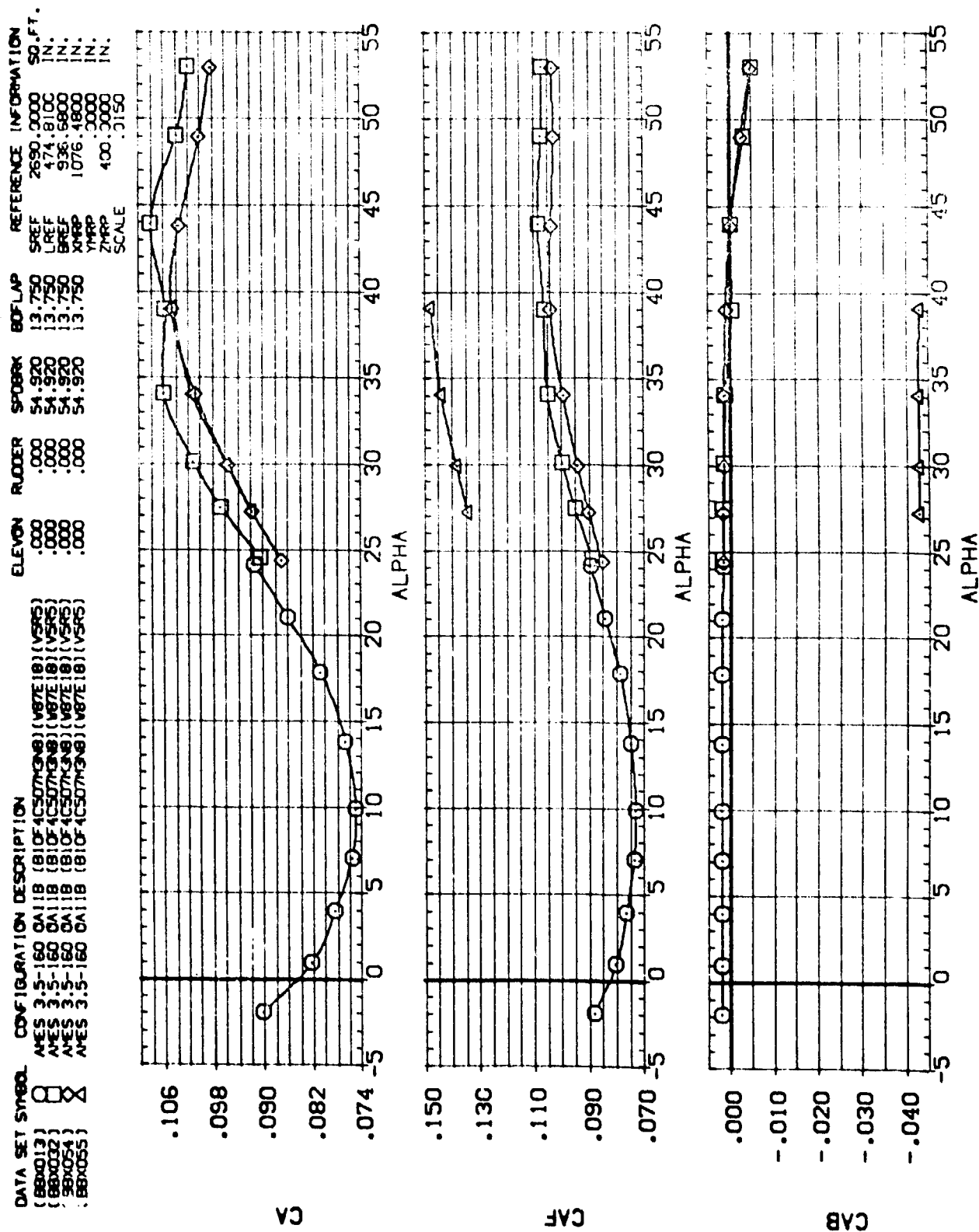


FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS

(A) MACH = 7.32


$$(A)_{MACH} = 7.32$$

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPD BRK	BD FLAP	REFERENCE INFORMATION
(BBX013)	AVES 3.5-60 CA118 (B)DF4C507H3N8 (V87E18) (V5R5)	.000	.000	54.920	13.750	SREF 2690.0000
(BBX032)	AVES 3.5-60 CA118 (B)DF4C507H3N8 (V87E18) (V5R5)	.000	.000	54.920	13.750	LREF 474.0100
(BBX054)	AVES 3.5-60 CA118 (B)DF4C507H3N8 (V87E18) (V5R5)	.000	.000	54.920	13.750	BREF 936.6800
(BBX055)	AVES 3.5-60 CA118 (B)DF4C507H3N8 (V87E18) (V5R5)	.000	.000	54.920	13.750	YMRP 1076.0000
						ZMRP 400.0000
						SCALE .0150

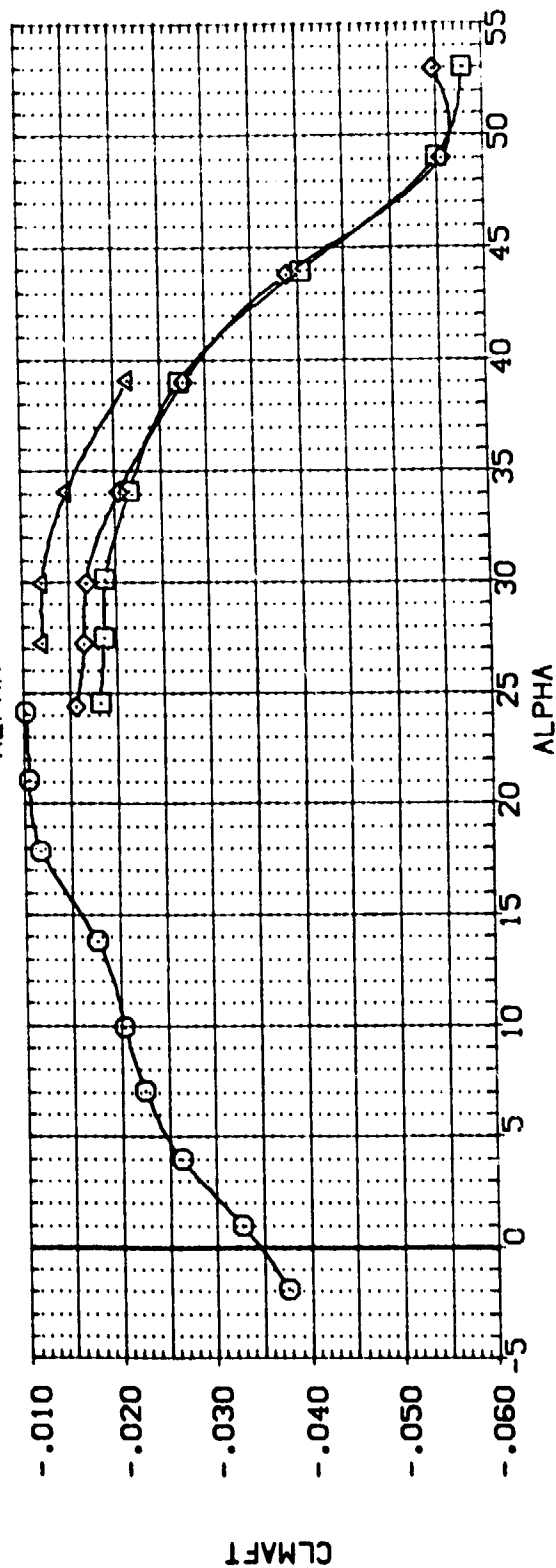
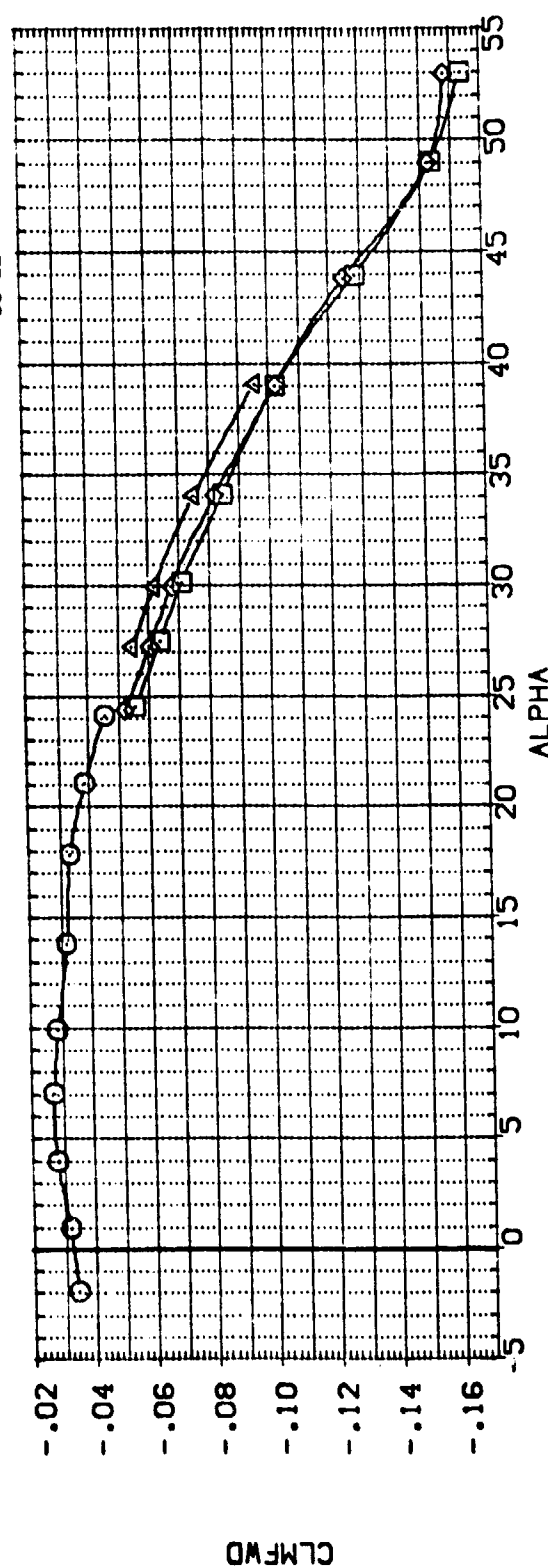


FIG. 4.C.2 MACH 7.32. 13.75 DEGREE BODYFLAP EFFECTS
(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BDFLAP	REFERENCE INFORMATION
(88X013)	AVES 3.5-160 DA11B (B1D-4C507G-8) (V595)	.000	.000	54.920	13.750	SREF 2690.0000 SO.FT. IN.
(88X032)	AVES 3.5-160 DA11B (B1D-4C507G-8) (V595)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(88X054)	AVES 3.5-160 DA11B (B1D-4C507G-8) (V595)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(88X055)	AVES 3.5-160 DA11B (B1D-4C507G-8) (V595)	.000	.000	54.920	13.750	XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

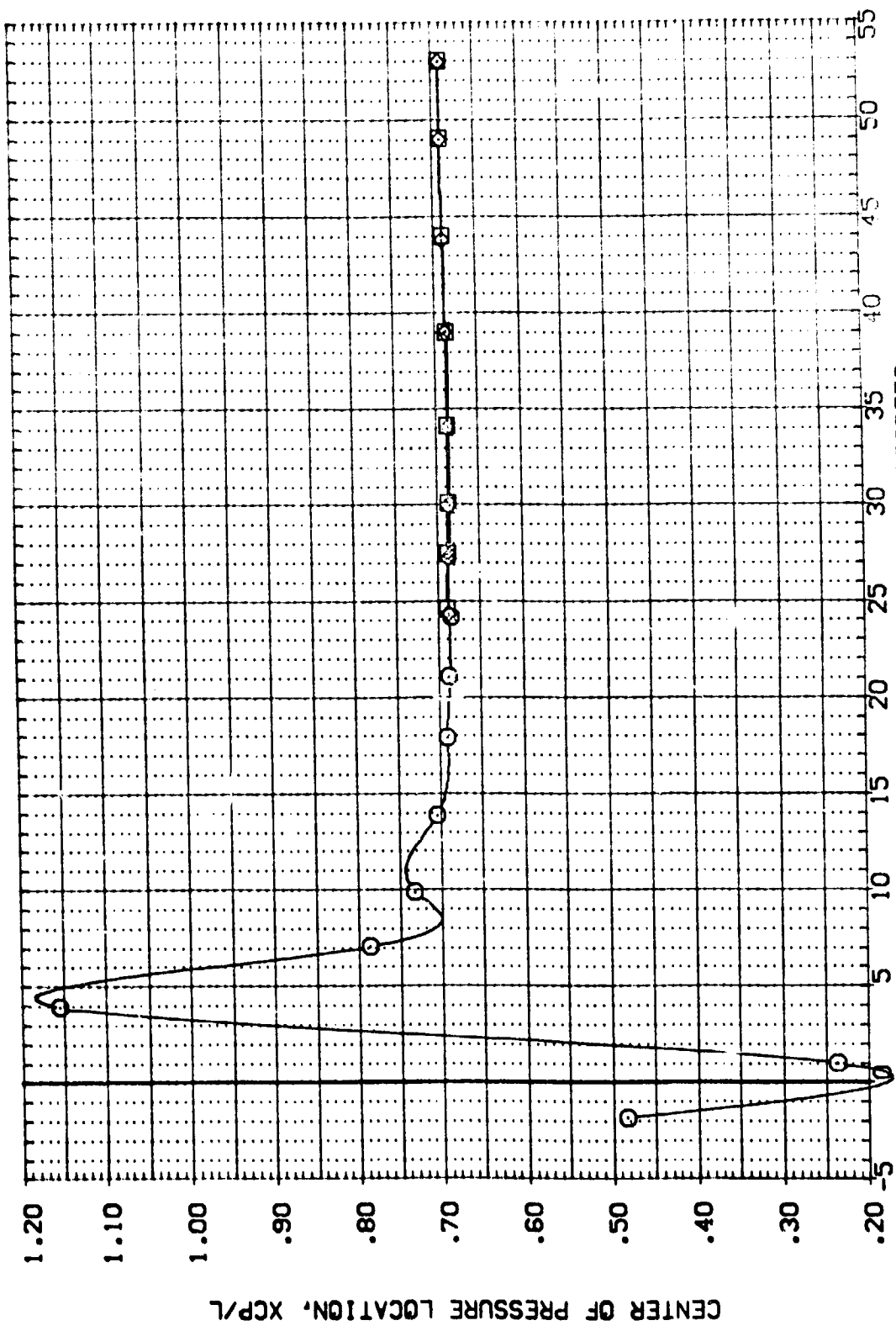
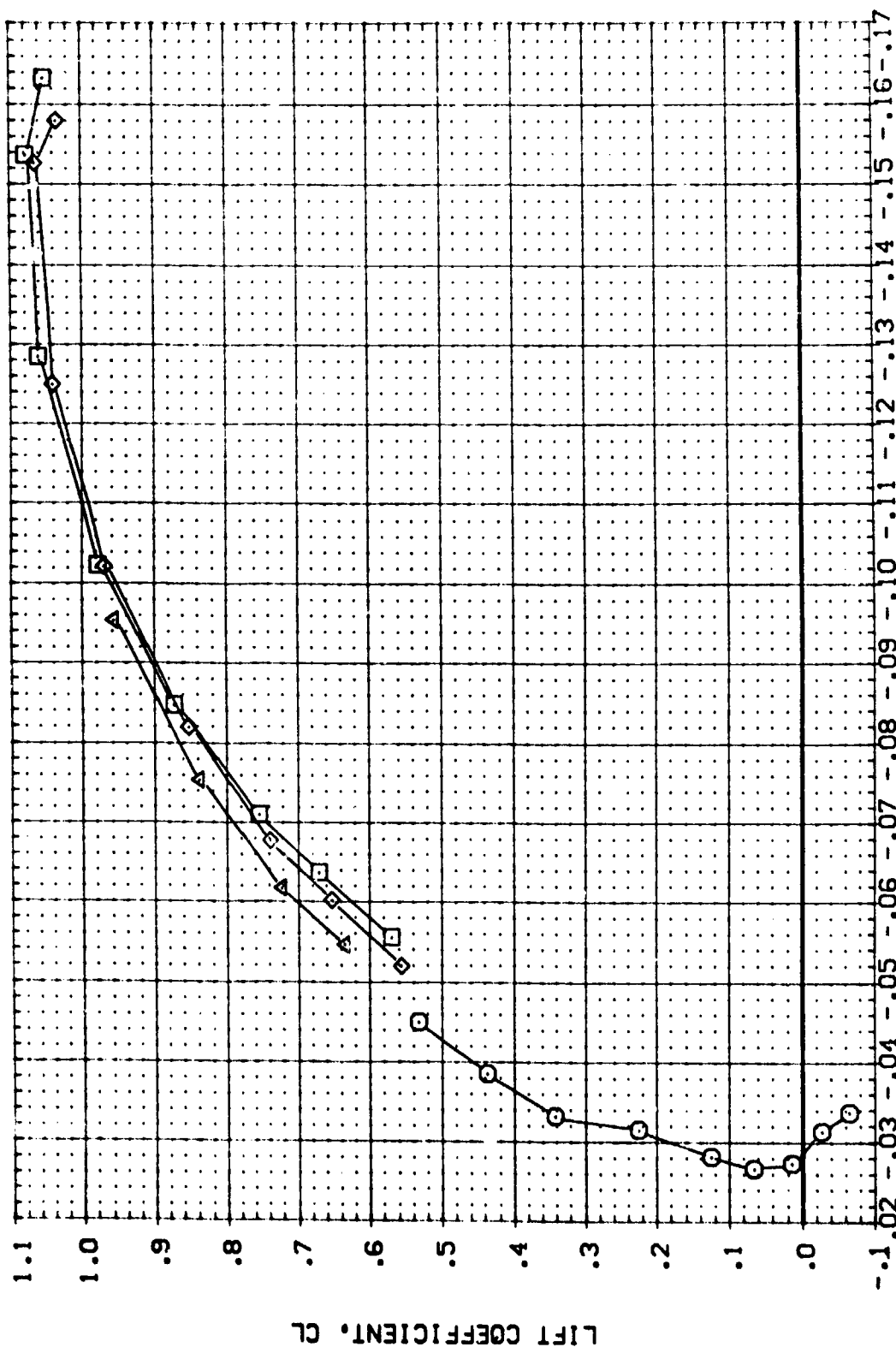


FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPORRK	BOFLAP	REFERENCE INFORMATION
(99X013)	AVES 3.5-160 CA11B (B10F4C507M3-8) (V87E18) (V5RS)	.000	.000	54.920	13.750	SREF 2690.0700 SQ.FT.
(99X032)	AVES 3.5-160 CA11B (B10F4C507M3-8) (V87E18) (V5RS)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(99X054)	AVES 3.5-160 CA11B (B10F4C507M3-8) (V87E18) (V5RS)	.000	.000	54.920	13.750	BREF 536.6800 IN.
(99X055)	AVES 3.5-160 CA11B (B10F4C507M3-8) (V87E18) (V5RS)	.000	.000	54.920	13.750	XREF 1076.4800 IN.
						YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150



FORWARD PITCHING MOMENT COEFFICIENT, CLMFW

FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDRBK	BDFLAP	REFERENCE INFORMATION
(880013)	AVES 3.5-160 DA118 (810F4C507M348)(V87E18)(V5R5)	.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(880032)	AVES 3.5-160 DA118 (810F4C507M348)(V87E18)(V5R5)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(880054)	AVES 3.5-160 DA118 (810F4C507M348)(V87E18)(V5R5)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(880055)	AVES 3.5-160 DA118 (810F4C507M348)(V87E18)(V5R5)	.000	.000	54.920	13.750	YMRP 1076.1800 IN.
						ZMRP 400.0000 IN.
						SCALE .3150

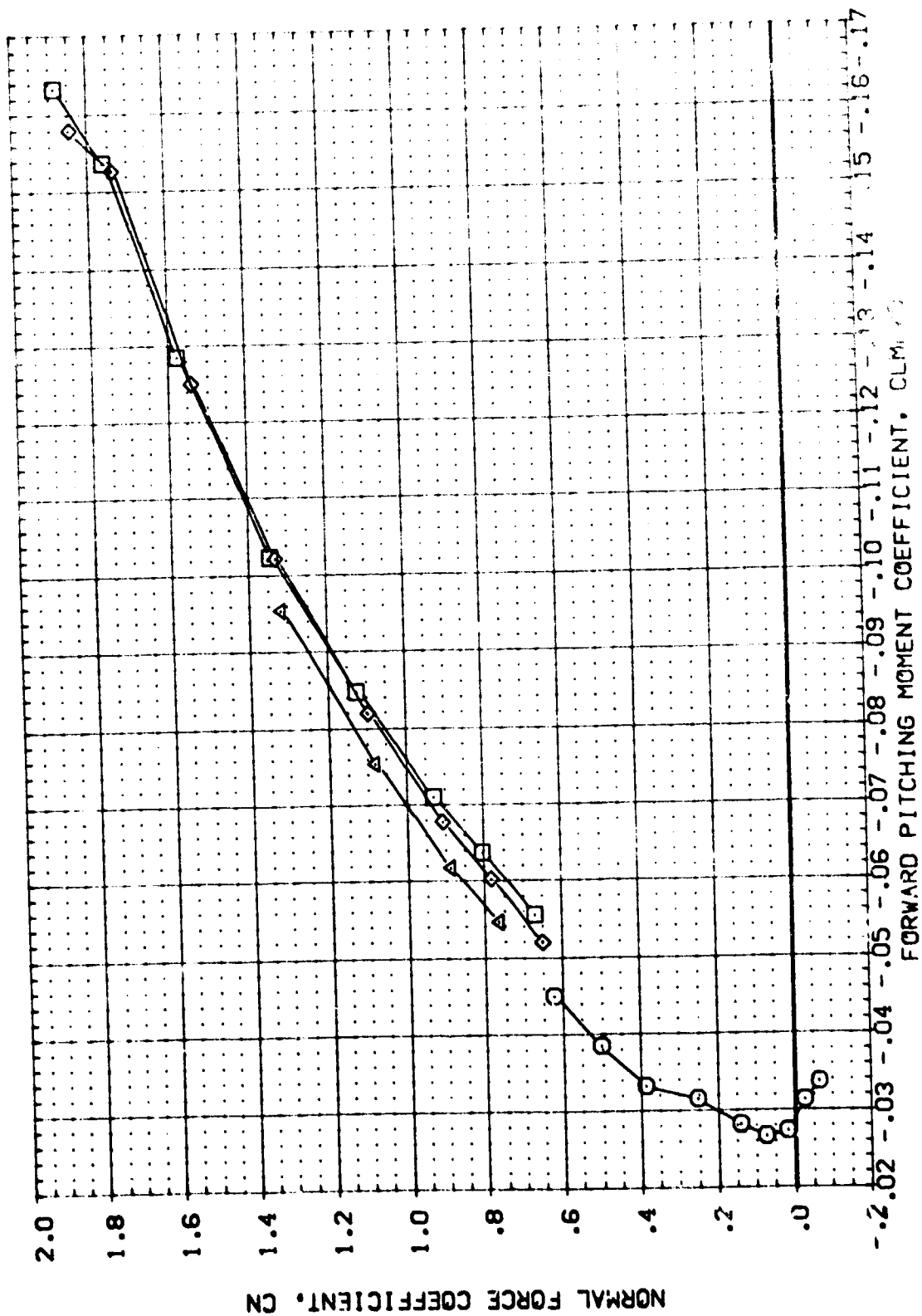


FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BOFLAP	REFERENCE INFORMATION
(BBX013)	AMES 3.5-160 0A11B (810F4C507H3N8)(V87E18)(V5RS)	.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
(BBX032)	AMES 3.5-160 0A11B (810F4C507H3N8)(V87E18)(V5RS)	.000	.000	54.920	13.750	LREF 474.8100 IN.
(BBX054)	AMES 3.5-160 0A11B (810F4C507H3N8)(V87E18)(V5RS)	.000	.000	54.920	13.750	BREF 936.6800 IN.
(BBX055)	AMES 3.5-160 0A11B (810F4C507H3N8)(V87E18)(V5RS)	.000	.000	54.920	13.750	XPRP 1076.4800 IN.
						YPRP .0000 IN.
						ZPRP .0000 IN.
						SCALE .0150

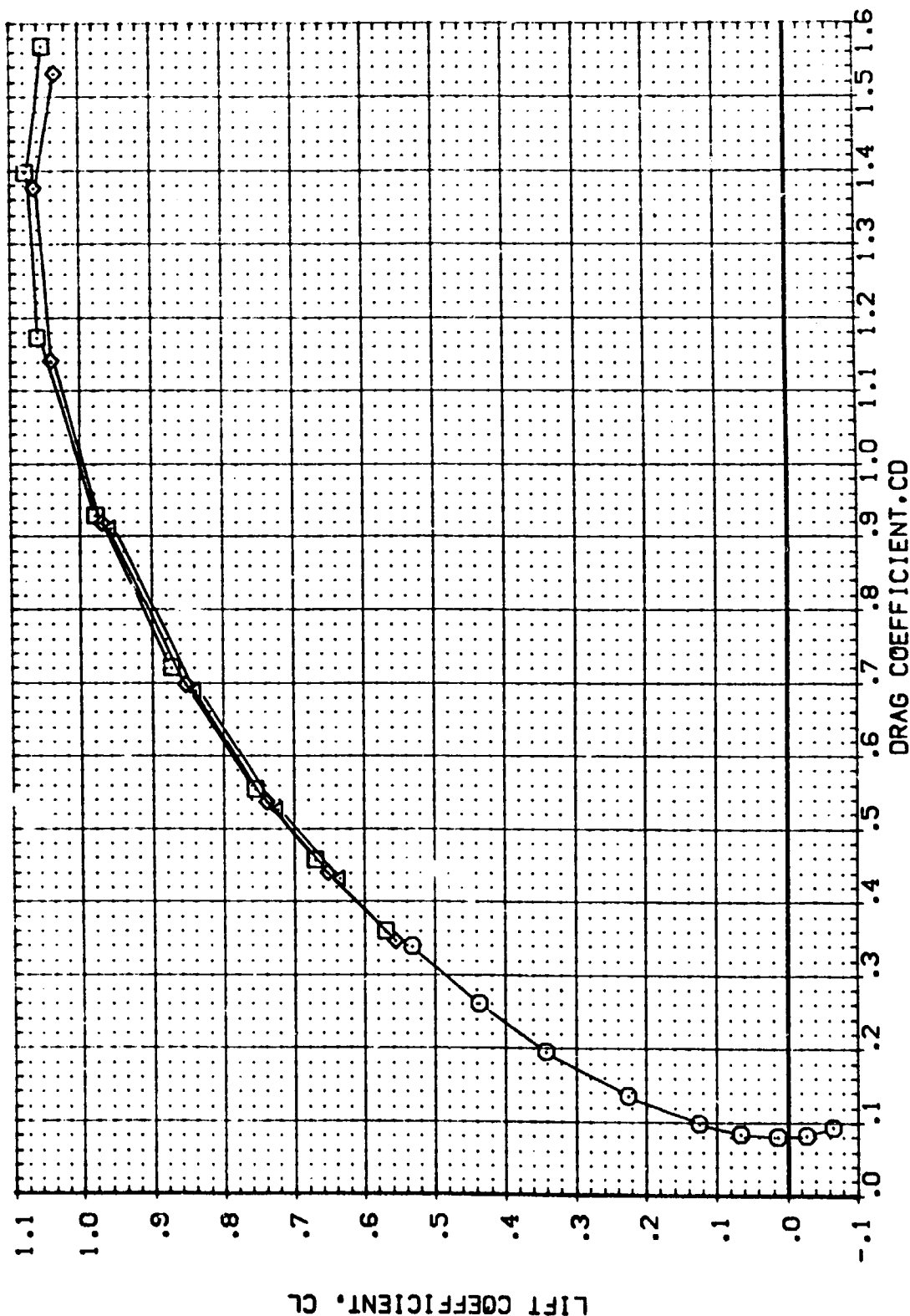
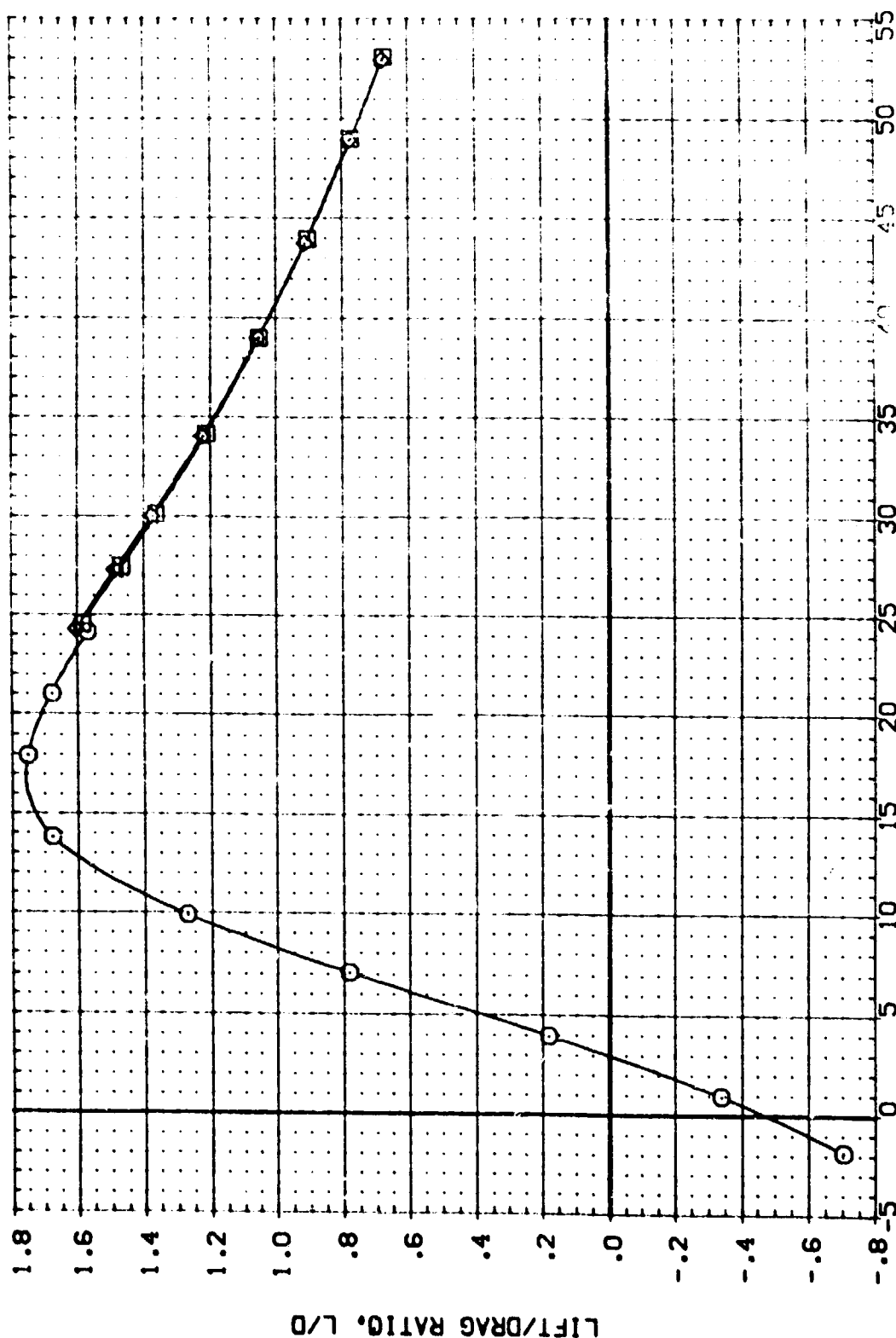


FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPDBRK	BODYFLAP	REFERENCE INFORMATION
(AB1013)	AMES 3.5-160 CA11B (810F4C507H3-8)(V87E18)(V5RS)	.000	.000	SA.920	13.750	SREF 2690.0000 SQ.FT.
(AB1032)	AMES 3.5-160 CA11B (810F4C507H3-8)(V87E18)(V5RS)	.000	.000	SA.920	13.750	LREF 474.8100 IN.
(AB1054)	AMES 3.5-160 CA11B (810F4C507H3-8)(V87E18)(V5RS)	.000	.000	SA.920	13.750	BREF 936.6800 IN.
(AB1055)	AMES 3.5-160 CA11B (810F4C507H3-8)(V87E18)(V5RS)	.000	.000	SA.920	13.750	XPRP 1076.4800 IN.
						YPRP 400.0000 IN.
						SCALE .0150



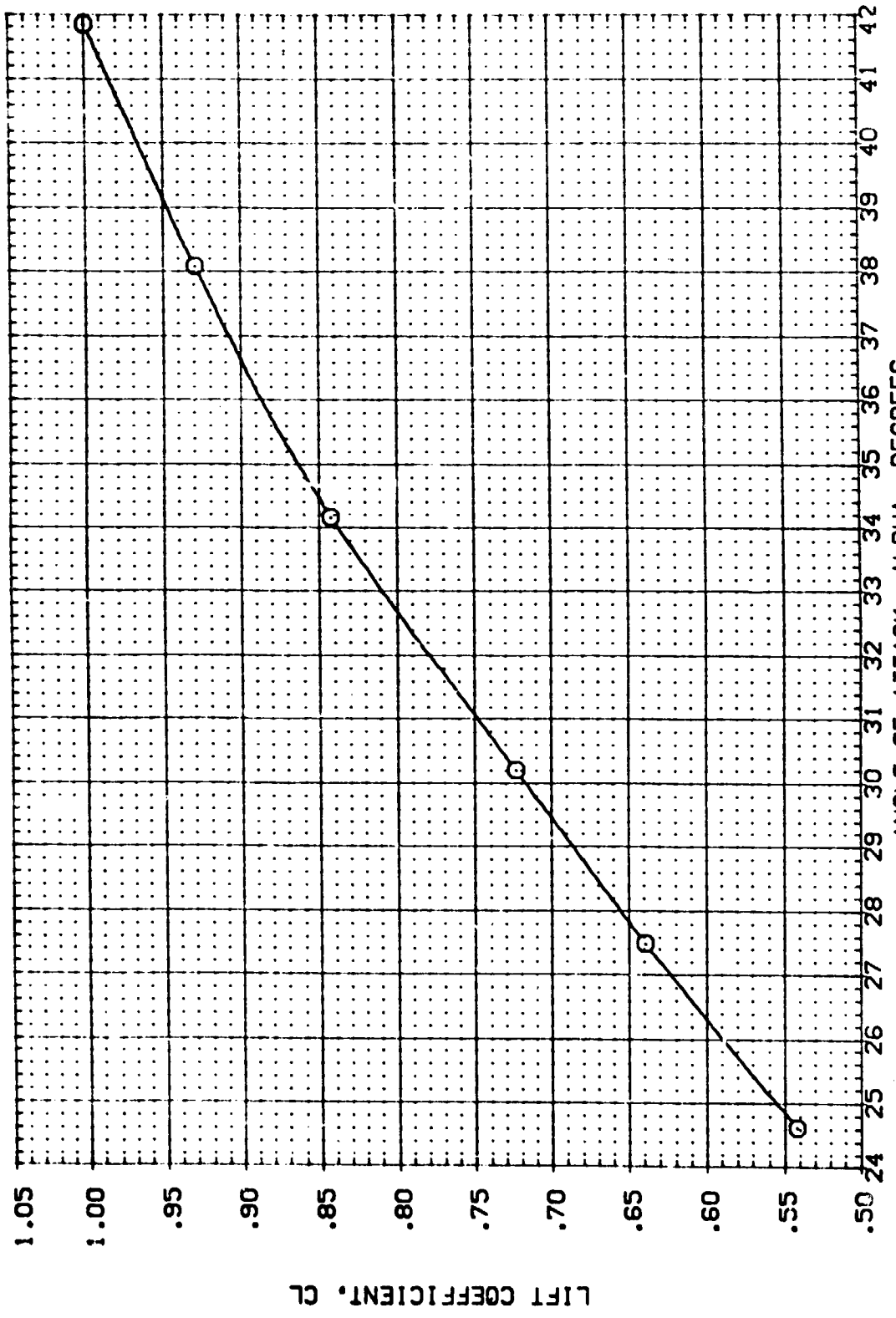
ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.C.2 MACH 7.32, 13.75 DEGREE BODYFLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDER	SPOILER	BD FLAP	REFERENCE INFORMATION
(BBX038) ○	AVES 3.5-160 CA11B (B10F4C507K3N8)(V87E18)(V5M5)	.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
						LREF 474.8100 IN.
						BREF 936.6800 IN.
						XPRP 1076.4800 IN.
						YPRP .0000 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

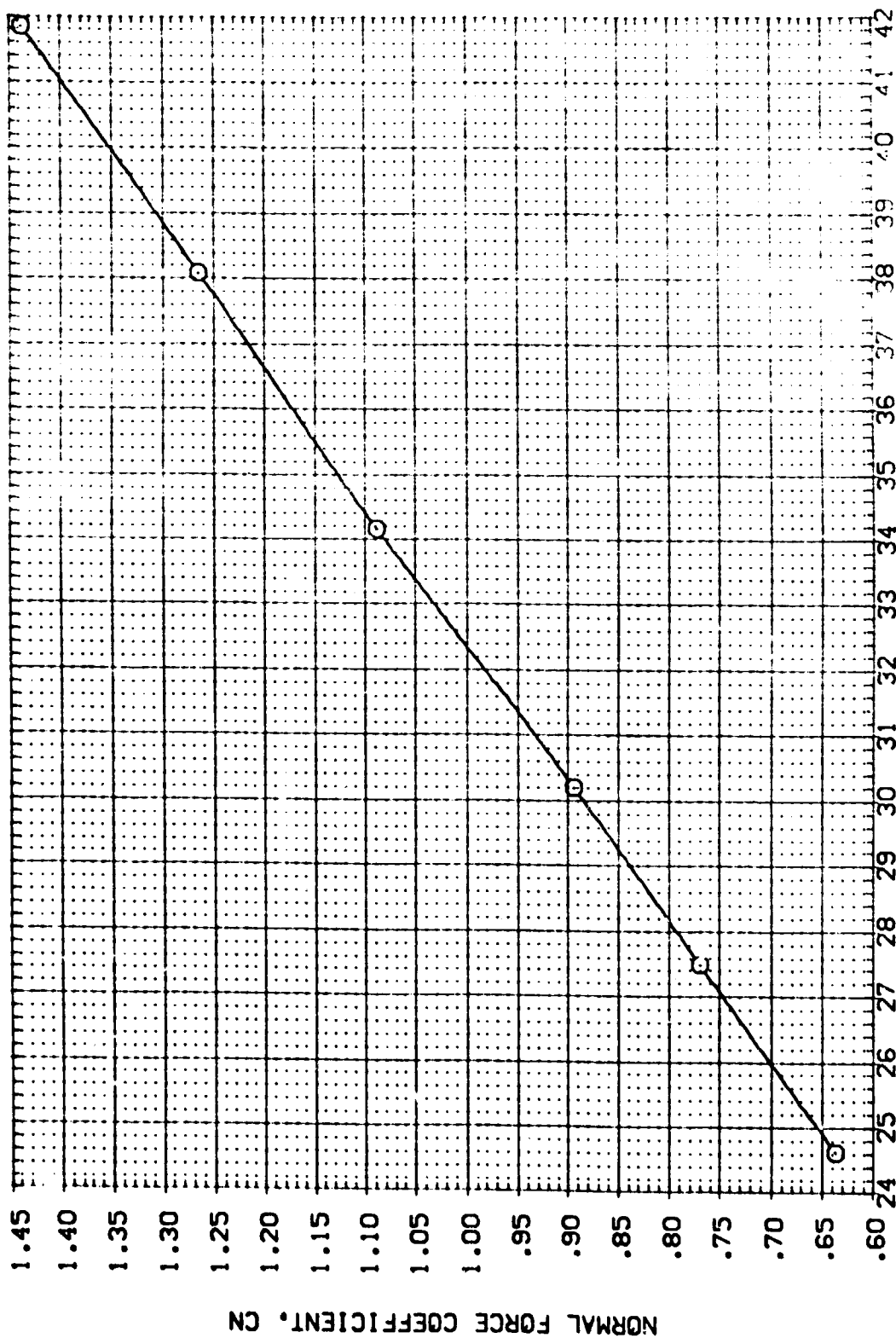


ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

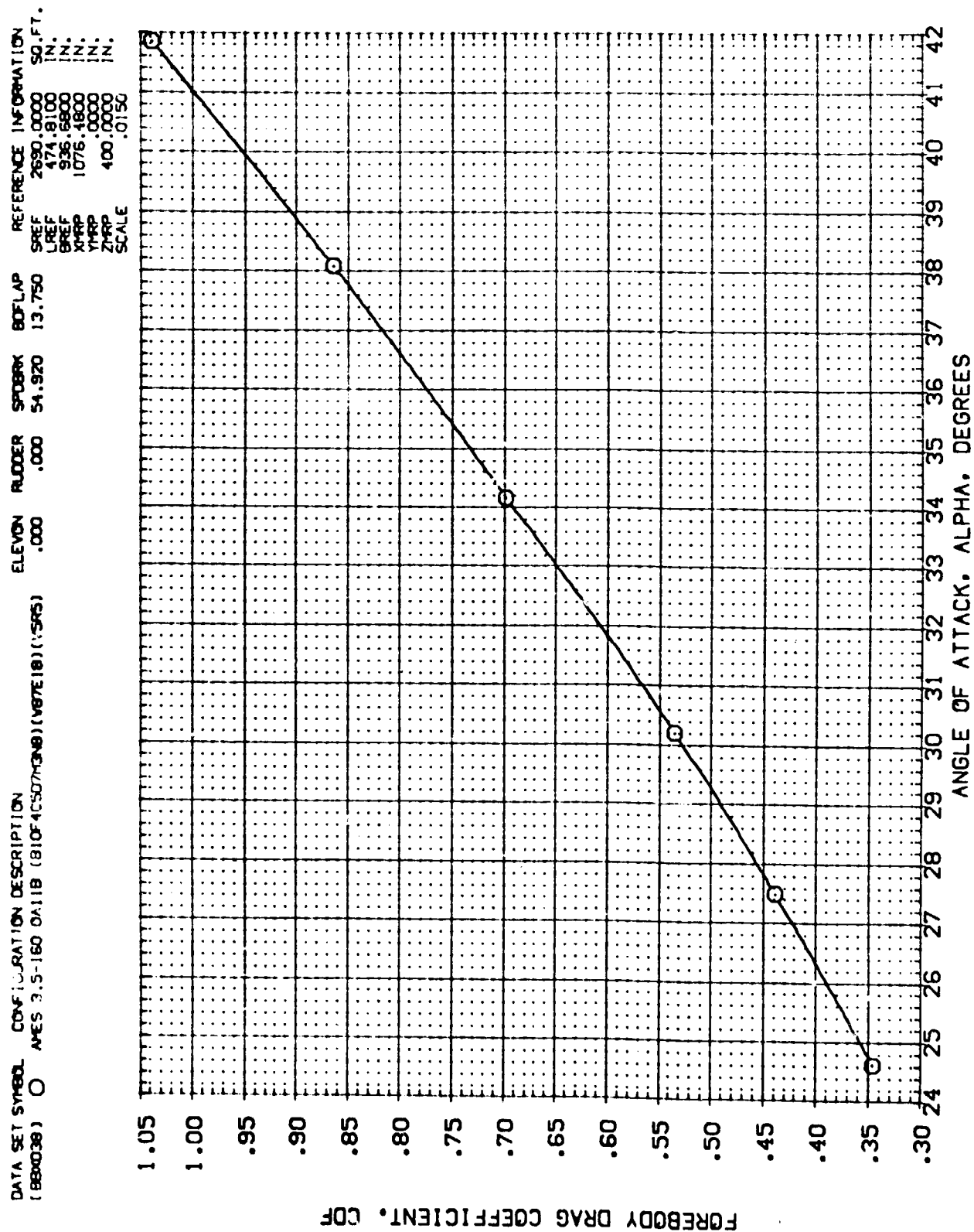
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SP08BK	80FLAP	REFERENCE INFORMATION
(BB0038)	AVES 3.5-160 DA118 (B10F4C507K3G8)(V87E18)(V3515)	.000	.000	54.920	13.750	SREF 2690.0000 SQ.FT.
○						LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE 400.0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29





DATA SET SYMBOL (BBX038) ○

CONFIGURATION DESCRIPTION (810°4CS07H348)(V87E18)(V55R5)

REFERENCE INFORMATION

SREF	2690.0000	SO, FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	400.0000	IN.
ZMRP	400.0000	IN.
SCALE	.3150	

ELEVON .000

RUDER .000

SPORRY 54.920

BOFLAP 13.750

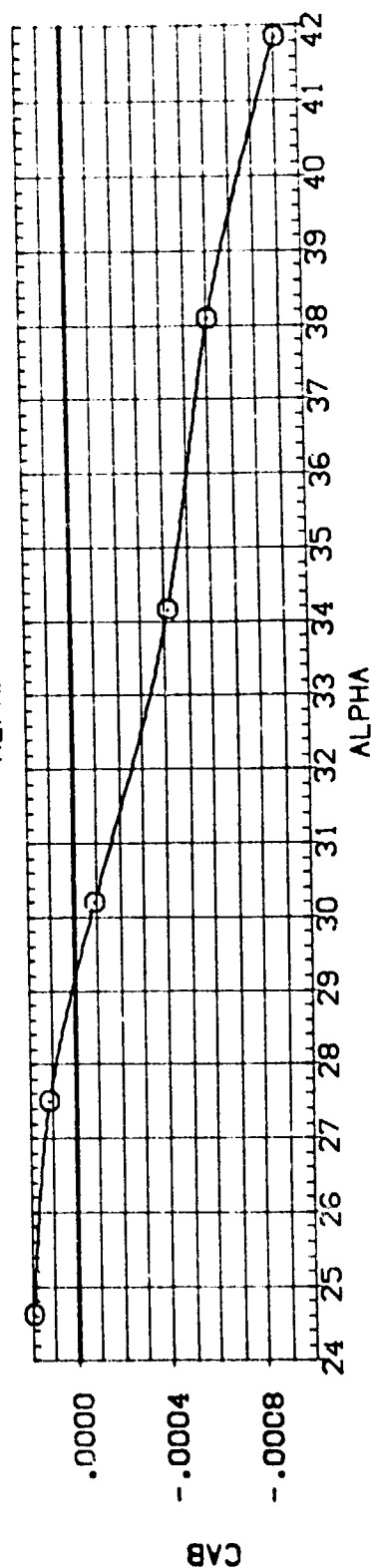
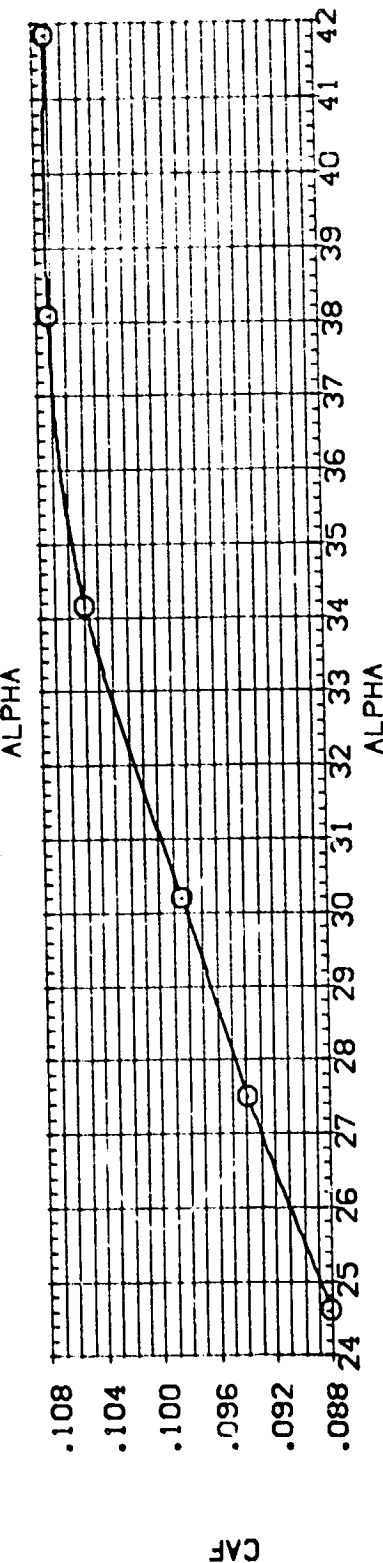
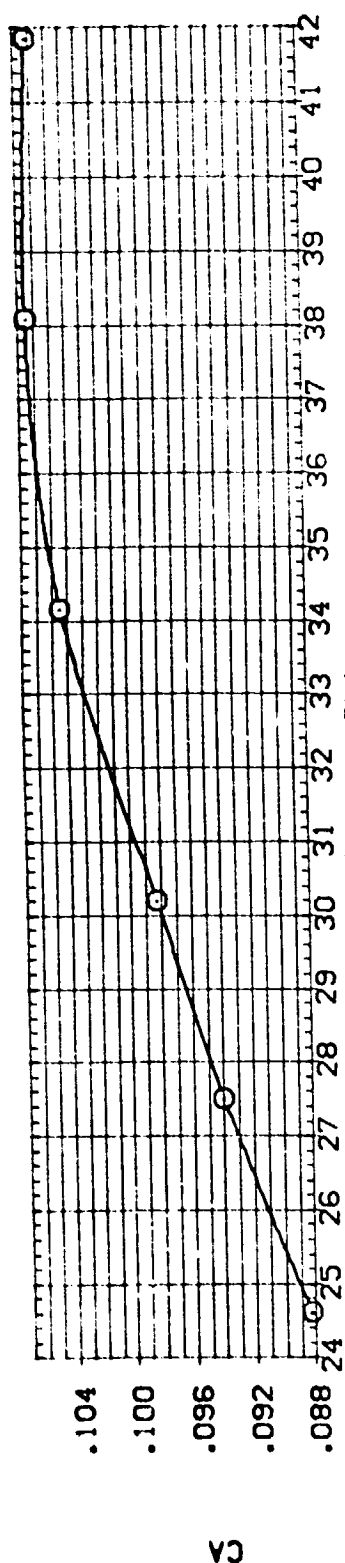


FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL ○ CONFIGURATION DESCRIPTION
(880038) ○ AYES 3.5-160 DAI18 (810F4C507M3048)(1487E18)(V545)

ELEVON RUDDER SPDRPK BOFLAP
.000 .000 54.920 13.750

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

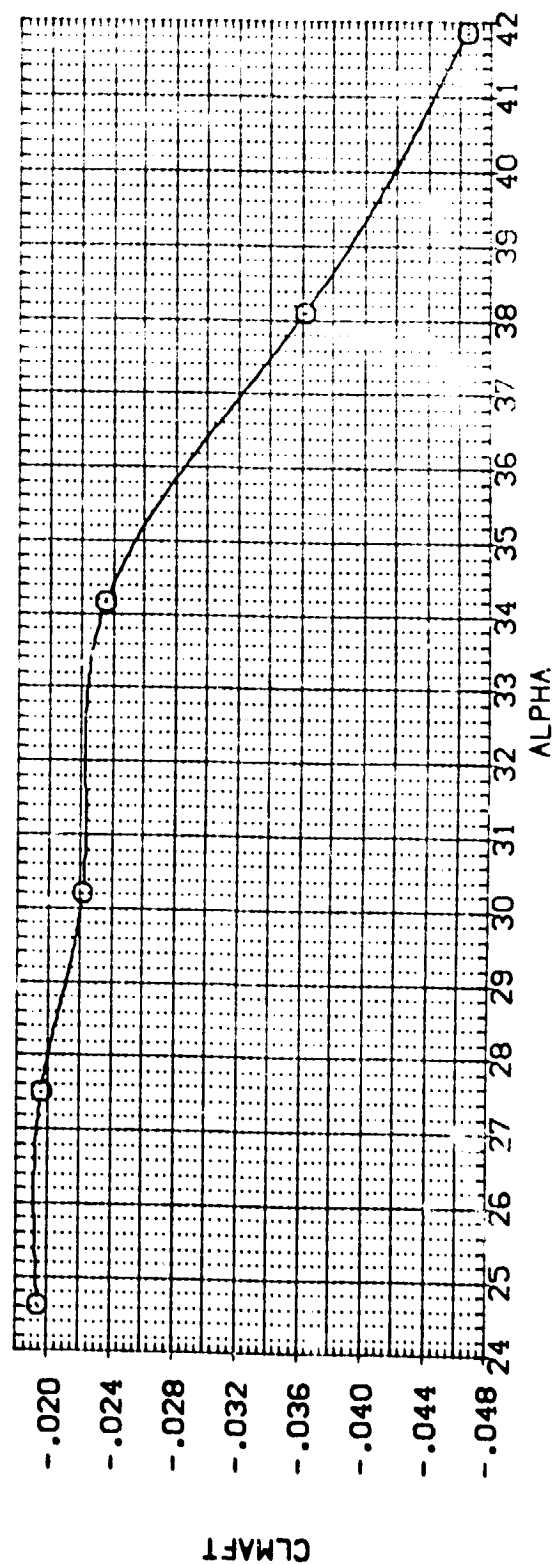
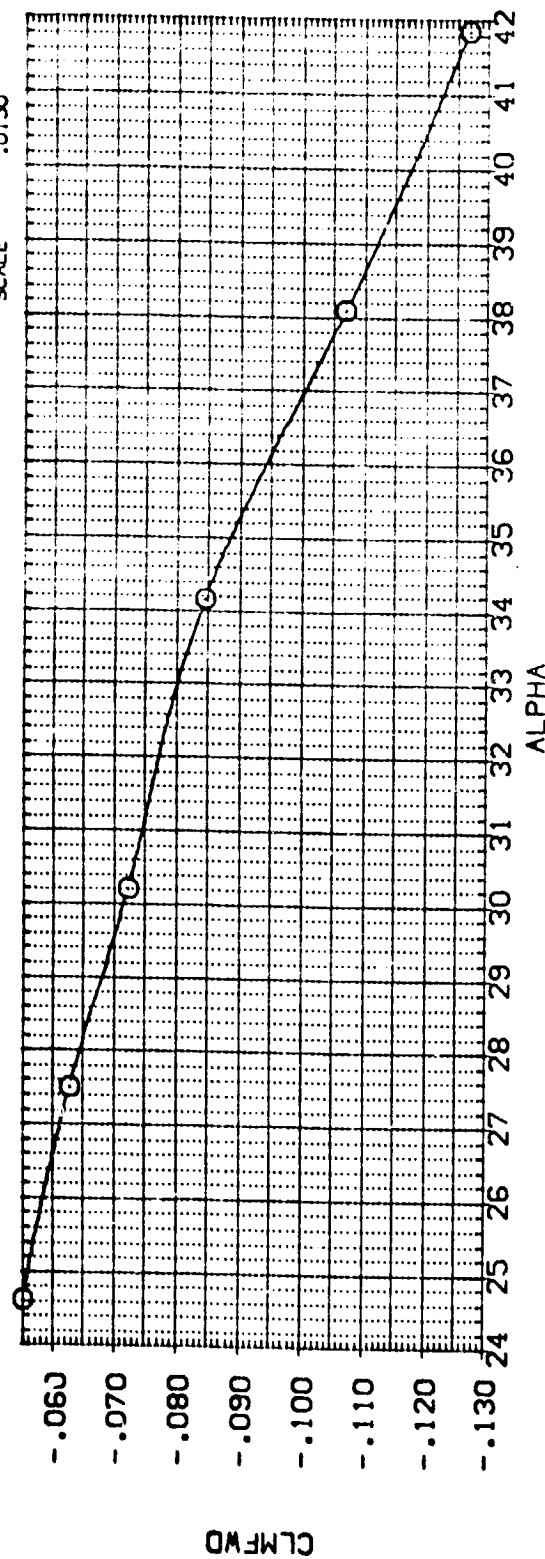


FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL (B8X038) ○ AYES 3.5-160 0A118 (B10F4C50743N81)(V87E181)(V5K5)

CONFIGURATION DESCRIPTION

ELEVON RUDDER SP0BRK B0FLAP

REFERENCE INFORMATION

SREF	2690.0000	50.FT.
LREF	474.8100	IN.
BREF	936.6200	N.
XMRP	1076.4800	N.
YMRP	.0000	N.
ZMRP	400.0000	N.
SCALE	.0150	

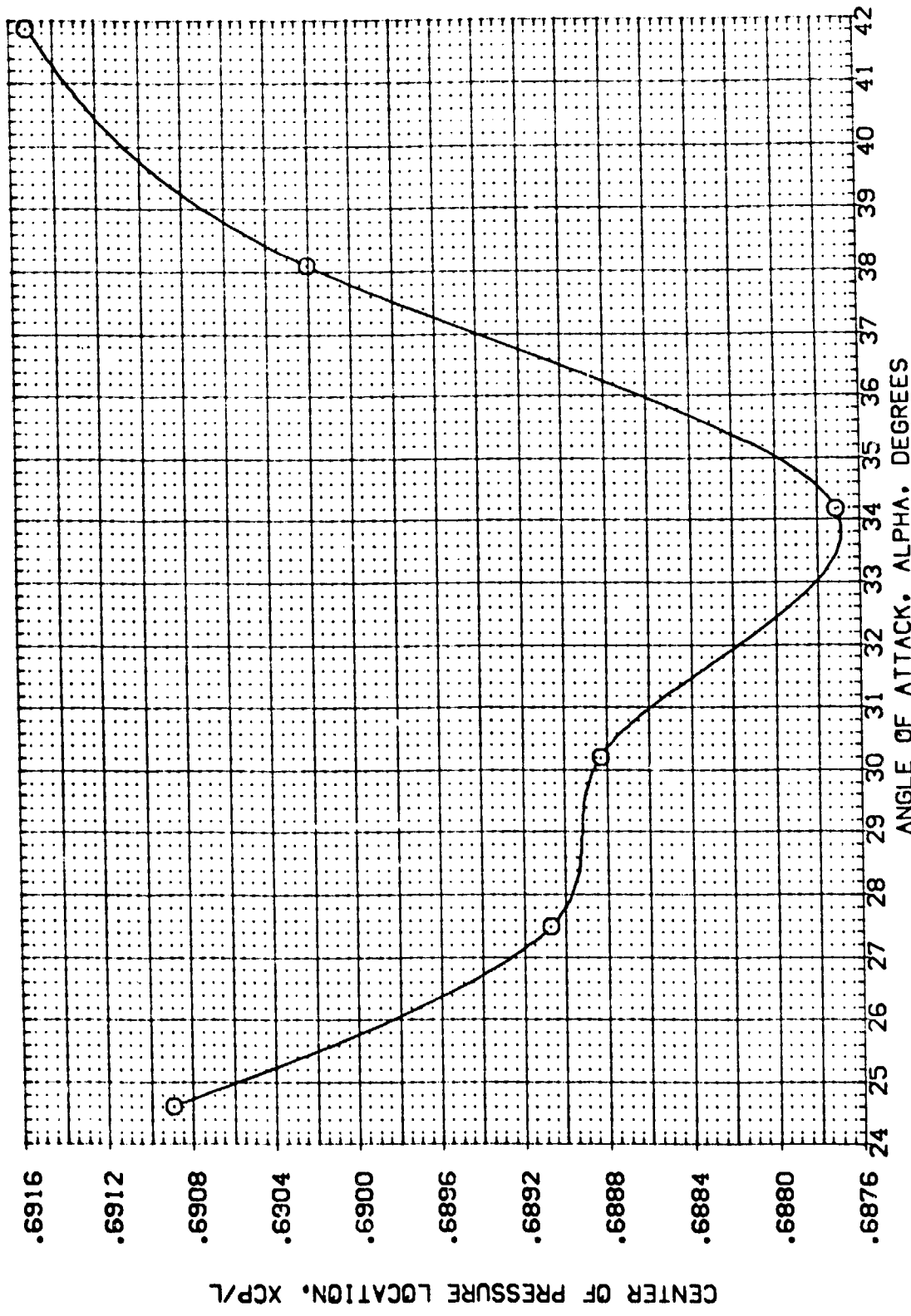


FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL (BB038) ○

CONFIGURATION DESCRIPTION
 ARES 3.5-160 0A118 (B10F4C507M3-8)(V87E18)(V595)

ELEVON RUDDER SPOILER BOFLAP
 .000 .000 54.920 13.750

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 536.8600 IN.
 XPRP 1076.4600 IN.
 YPRP .0000 IN.
 ZPRP 400.0000 IN.
 SCALE .0150

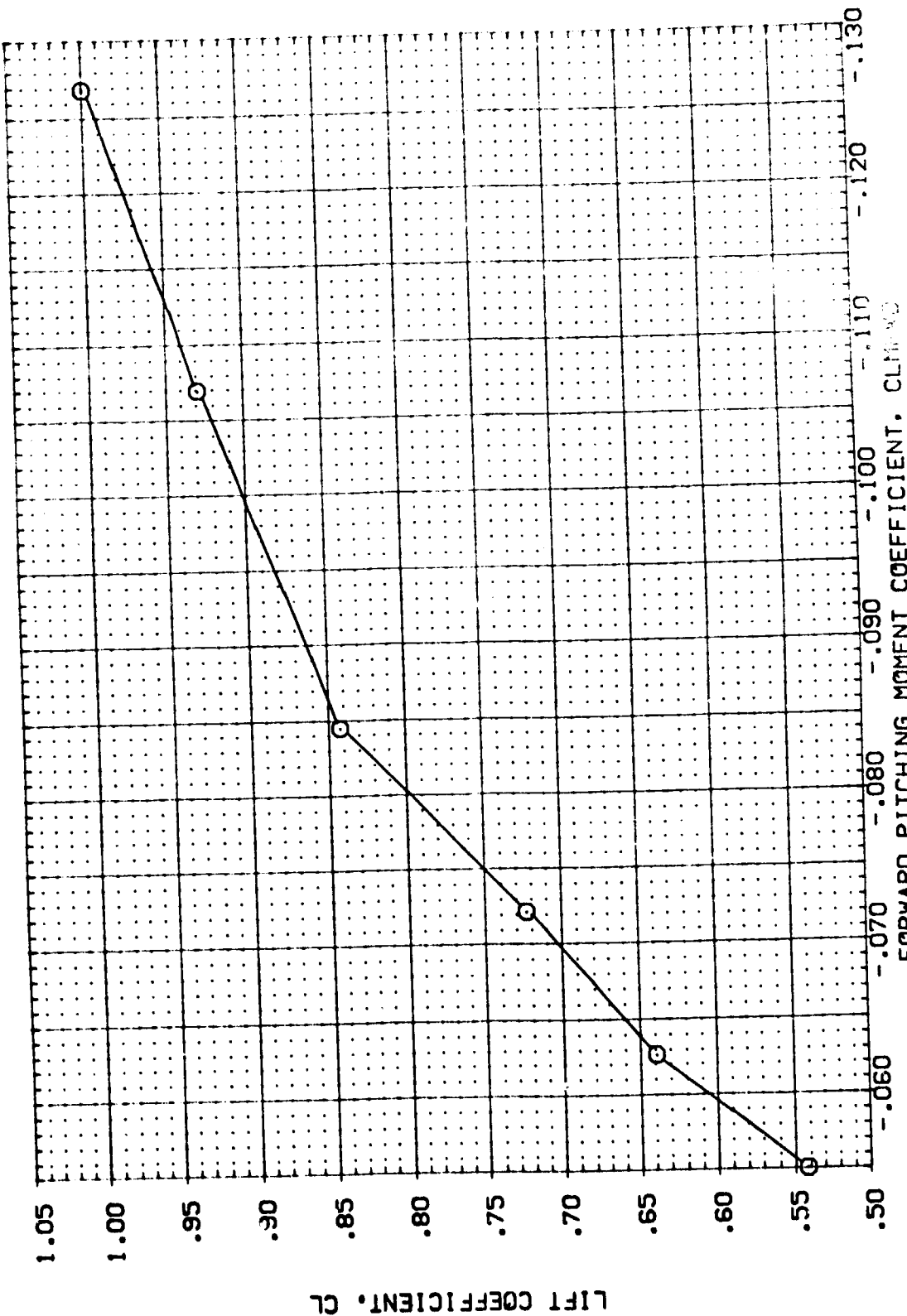


FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL (BBX038) O AMES 3.5-160 CALIB (B10F4C507K3N8)(V87E10)(V5K5)

CONFIGURATION DESCRIPTION
ELEVON RUDDER SPDBRK BDFLAP

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP 400.0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

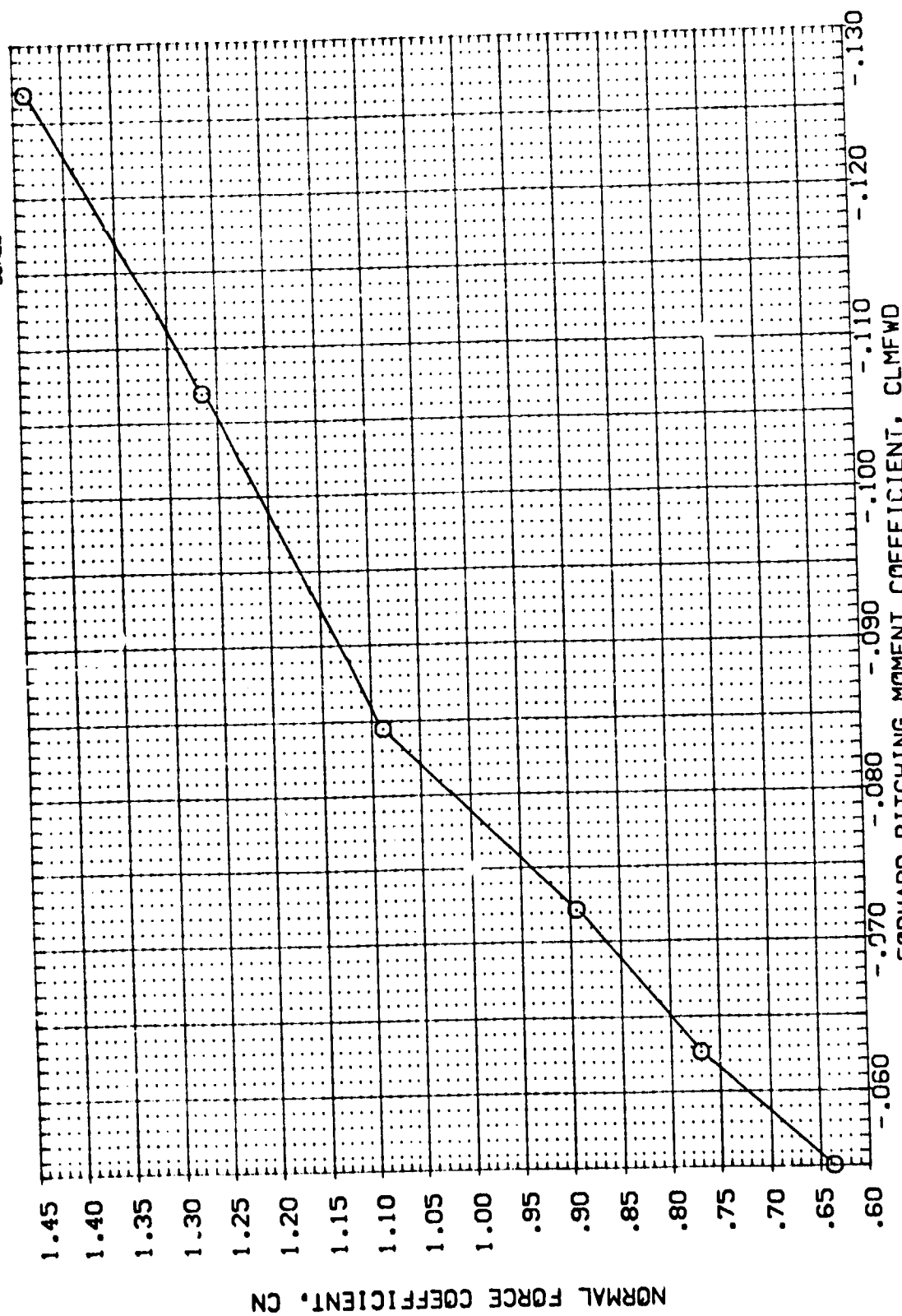


FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL (880038) \bigcirc CONFIGURATION DESCRIPTION AVES 3.5-160 0A118 (B10F4C507H348)(V87E18)(V59S)

ELEVON RUDDER SPURK BOFLAP .000 .000 54.920 13.750

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 0150

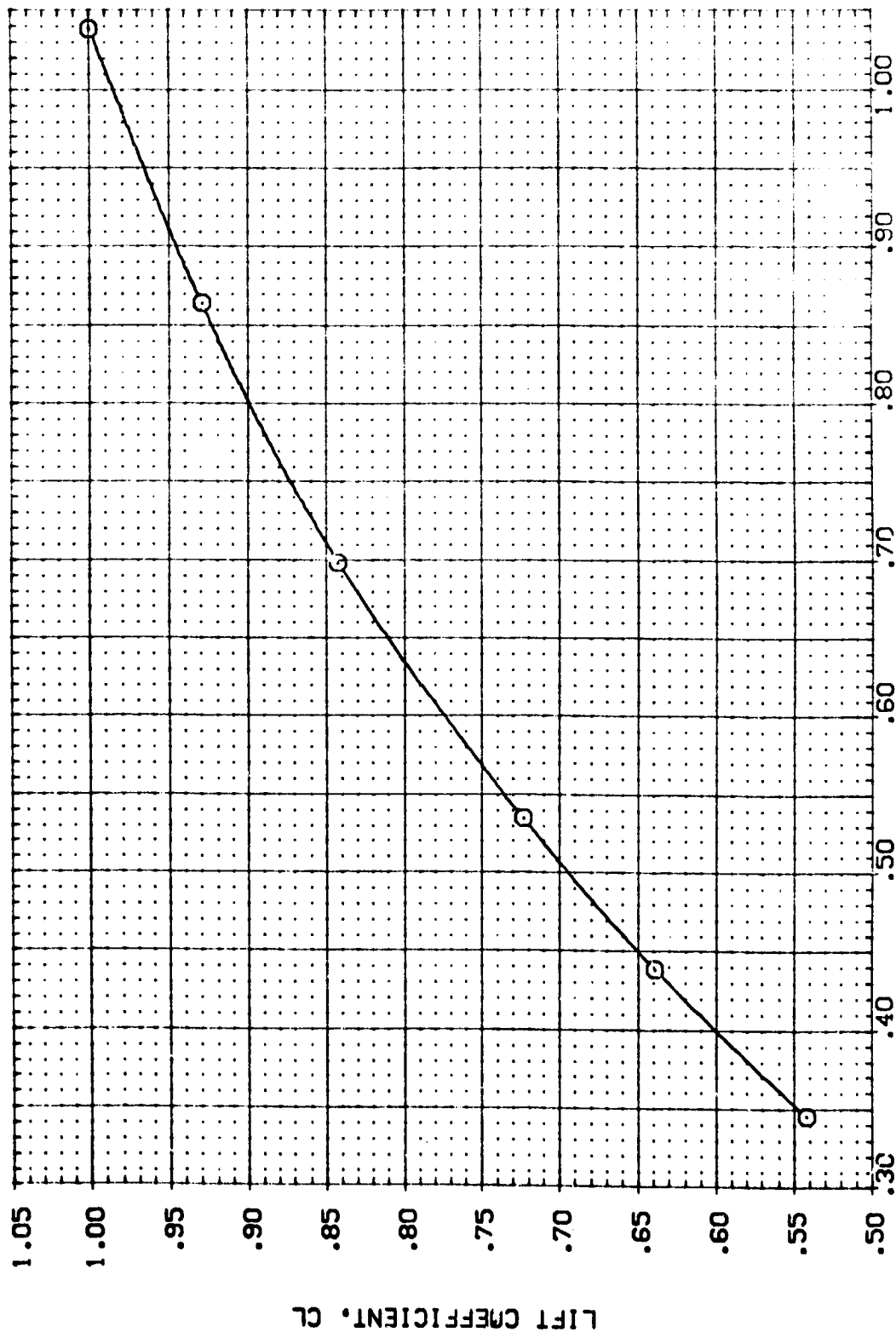


FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

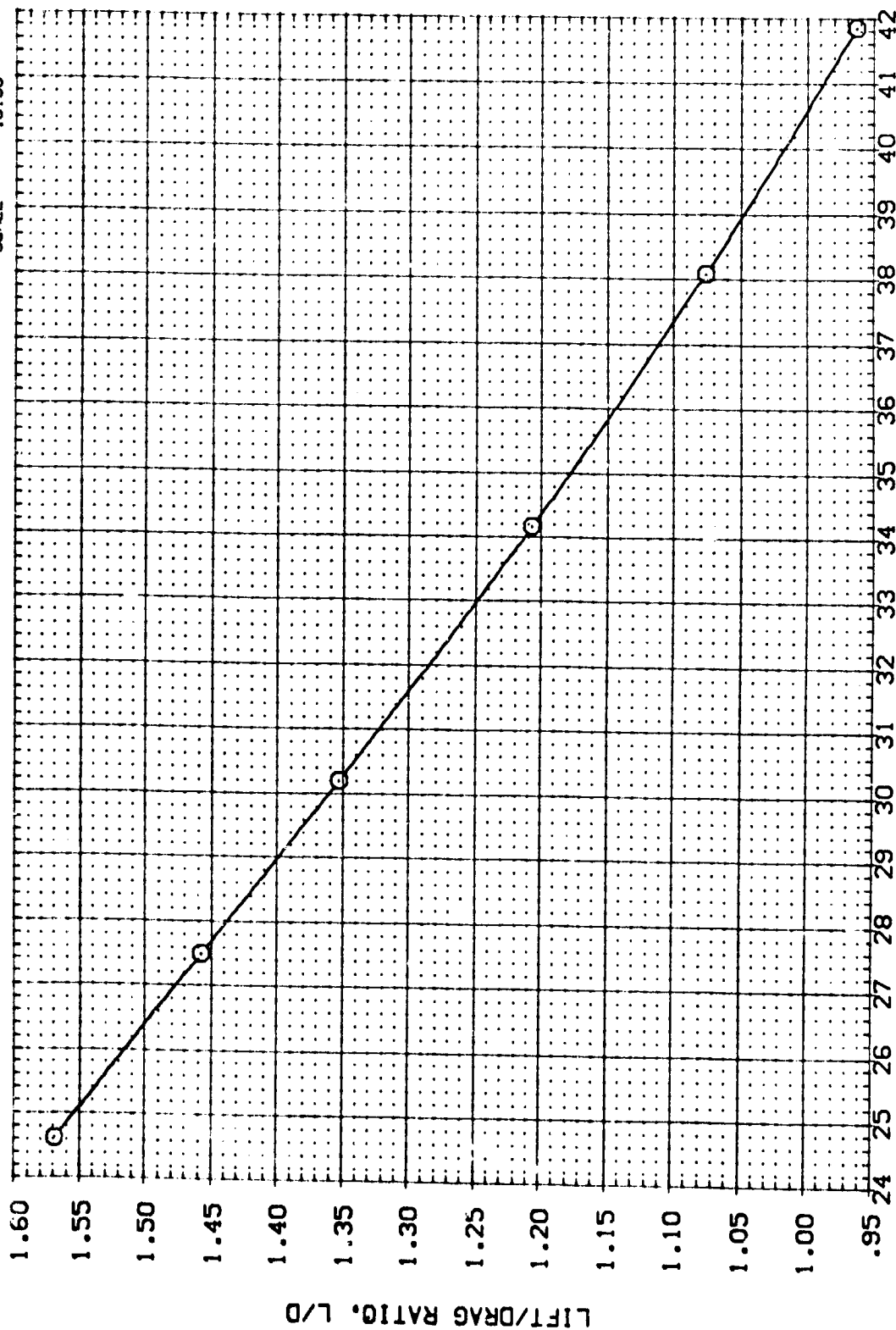
(A) MACH = 10.29

DATA SET SYMBOL: (A8038) O CONFIGURATION DESCRIPTION: AYES 3.5-160 CA11B (B10F4C507M3B8)(V87E18)(V5R5)

ELEVON: .000 RUDDER: .000 SPOILER: 51.920 BOFLAP: 13.750

REFERENCE INFORMATION:

	REF	2690.0000	SQ. FT.
SREF	2690.0000		
LREF	474.8100		IN.
BREF	936.6800		IN.
XMRP	1076.4800		IN.
YMRP	.0000		IN.
ZMRP	400.0000		IN.
SCALE	.0150		



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.C.3 MACH 10.29 13.75 DEGREE BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		DELBOF		ELEVON		SPDRBK		RUDDER		REFERENCE INFORMATION	
(F80647)	(F8064)	AVES 3.5-160	0A118 (B:0F4C5D773N8)(V87E18)(V505)	-14.250	.000	54.920	.000	.000	.000	SREF	2690.0000	50.000	
		AVES 3.5-160	0A118 (B:0F4C5D773N8)(V87E18)(V505)	13.750	.000	54.920	.000	.000	.000	LREF	474.8100	IN.	
										BREF	936.6800	IN.	
										XMRP	1076.4800	IN.	
										YMRP	400.0000	IN.	
										ZMRP	400.0000	IN.	
										SCALE	.0150		

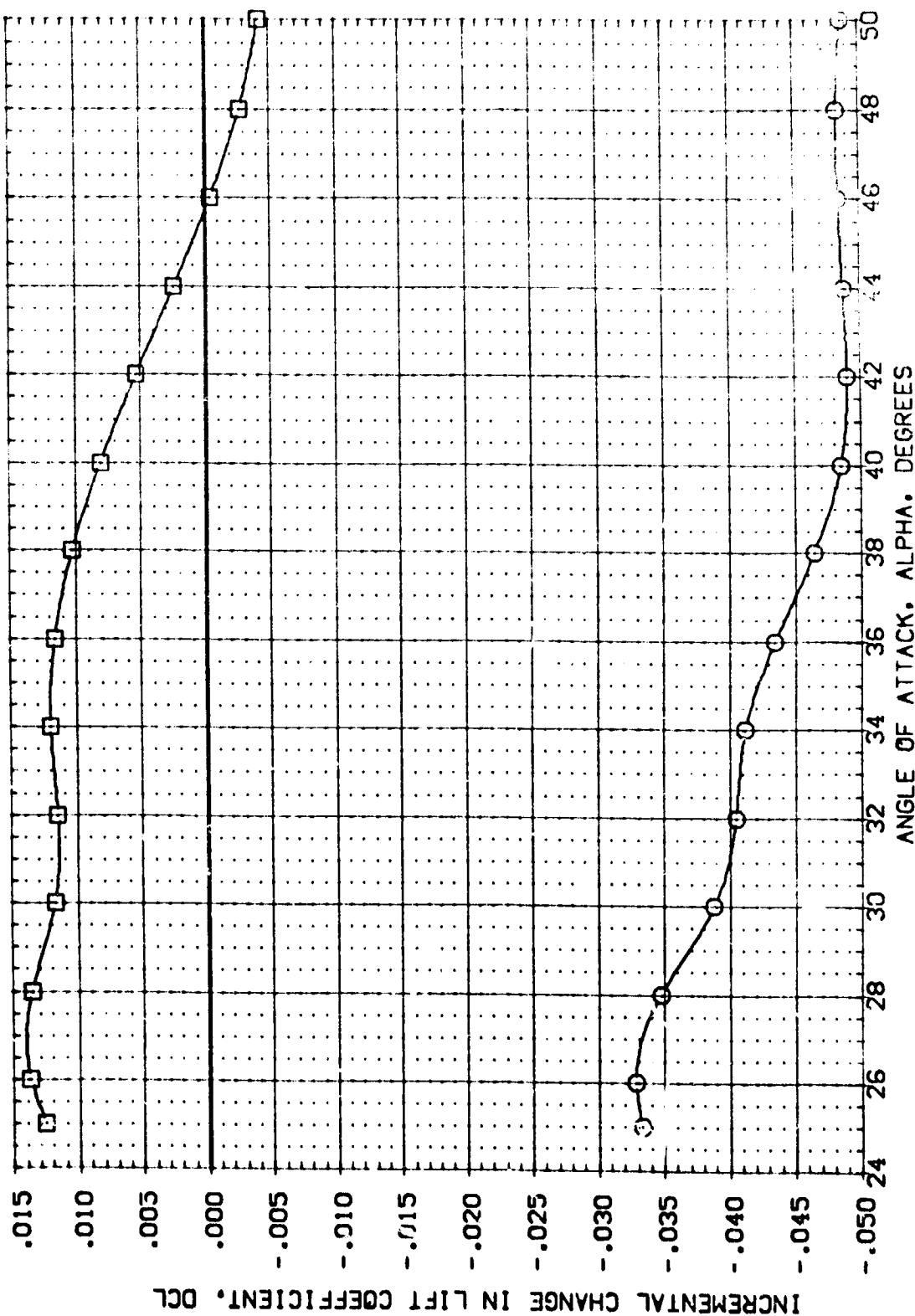


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

(A) MACH = 5.26



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELBOF	ELEVON	SPODBK	RUDDER	REFERENCE INFORMATION
(FBX064)	APES 3.5-160 CA11B (B10F4C507H3-8) (V87E13) (V59S)	-14.250	.000	54.920	.000	SREF 2650.0000 SO 50 CT.
	APES 3.5-160 CA11B (B10F4C507H3-8) (V87E16) (V59S)	13.750	.000	54.920	.000	LREF 474.8100 IN.
						PRF 936.6800 IN.
						XPRP 1076.4800 IN.
						YPRP .0000 IN.
						ZPRP .0000 IN.
						SCALE 400.0000

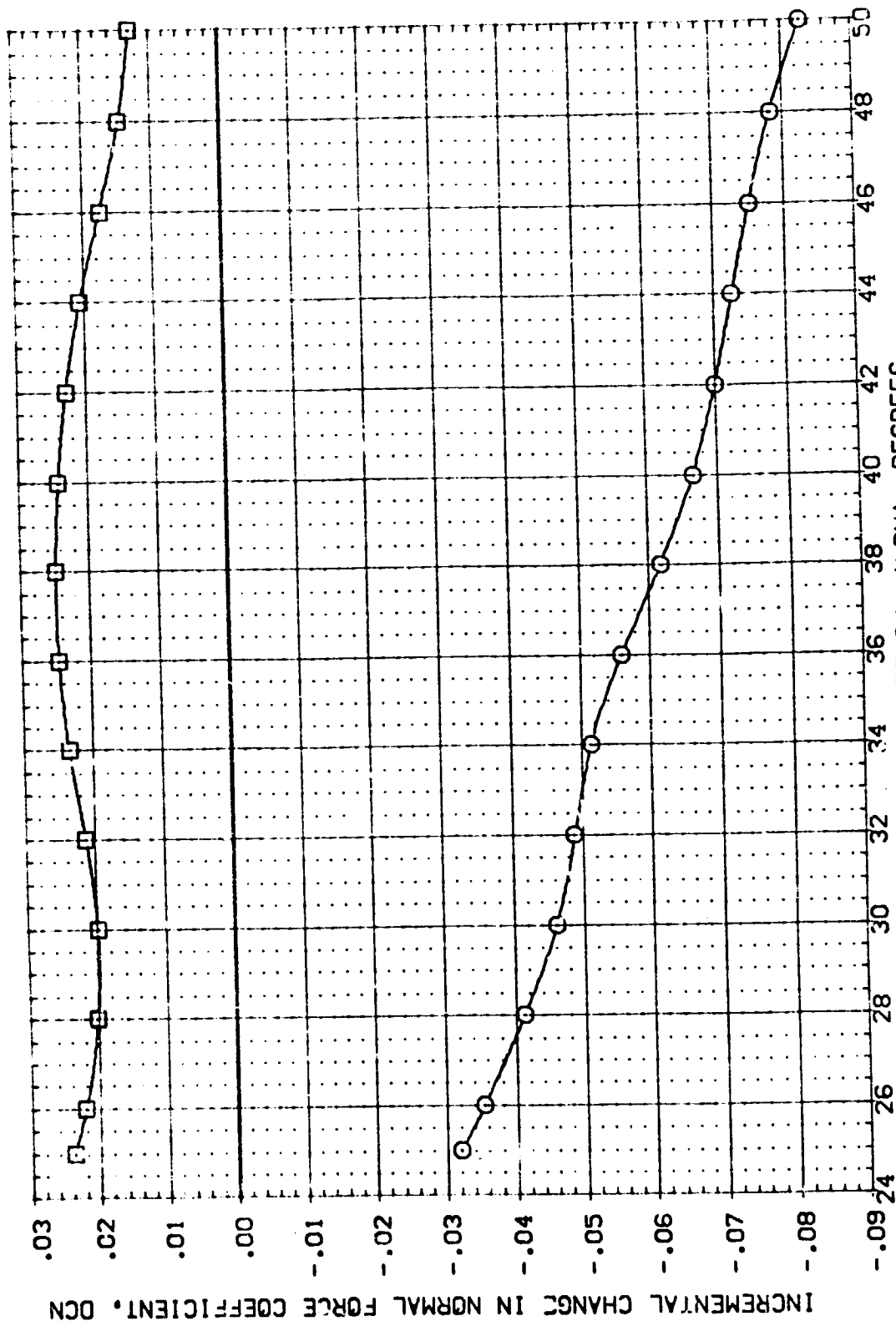


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

(A) MACH = 5.26

DATA SET SYMBOL: (FB0947) (FB054)

CONFIGURATION DESCRIPTION:
 ASES 3.5-160 CA11B (B10F4C507H348)(V87E18)(V87E18)
 ASES 3.5-160 CA11B (B10F4C507H348)(V87E18)(V87E18)

DELBOF: -14.250 13.750

ELEVON: .000 .000

SPOBRK: 54.920 54.920

RUDDER: .000 .000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 976.6800 IN.
 XPRP: 1076.4800 IN.
 YPRP: .0000 IN.
 ZPRP: .0000 IN.
 SCALE: 400 .0150

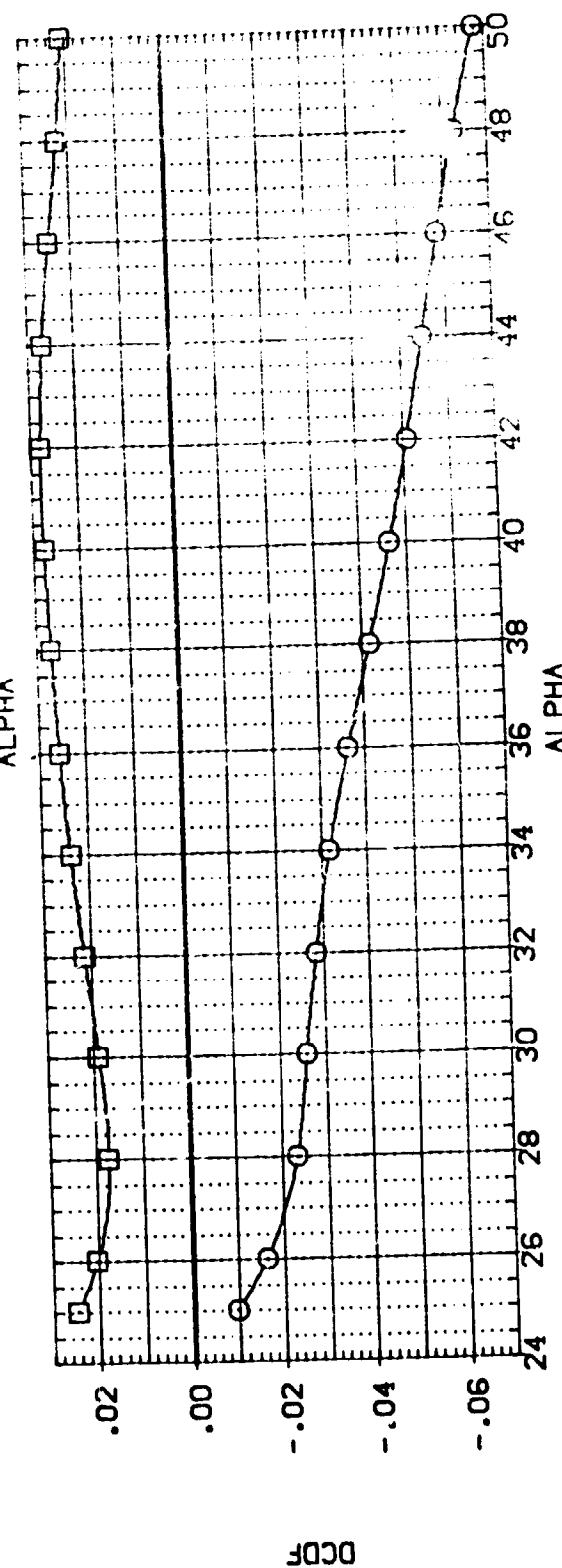
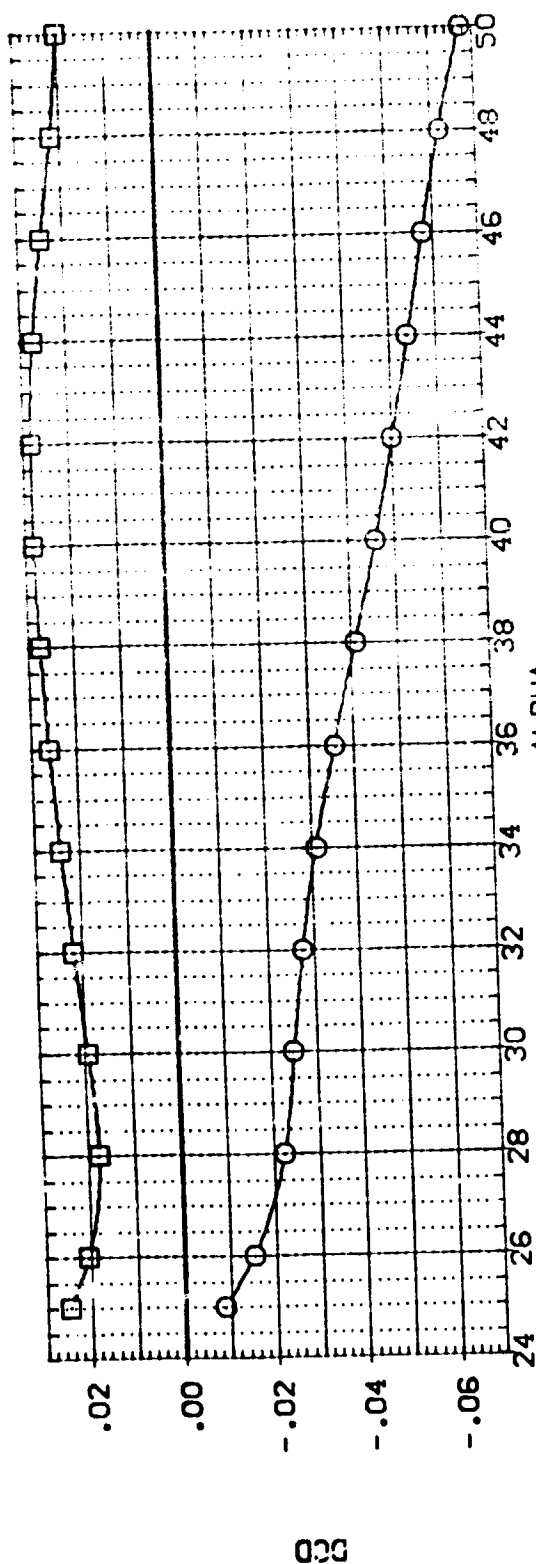



FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (FBX064)  CONFIGURATION DESCRIPTION: AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 2690.000
 AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 474.8100
 (FBX064) (FBX064) AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 935.8800
 (FBX064) (FBX064) AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 1076.4800
 (FBX064) (FBX064) AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 0.000
 (FBX064) (FBX064) AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 400.0000
 (FBX064) (FBX064) AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 0.0150
 (FBX064) (FBX064) AYES 3.5-180 DAI1B (B10F4C507N3-8)(V87E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: .000 RUDDER: .000 SO, FT.: 0.0150

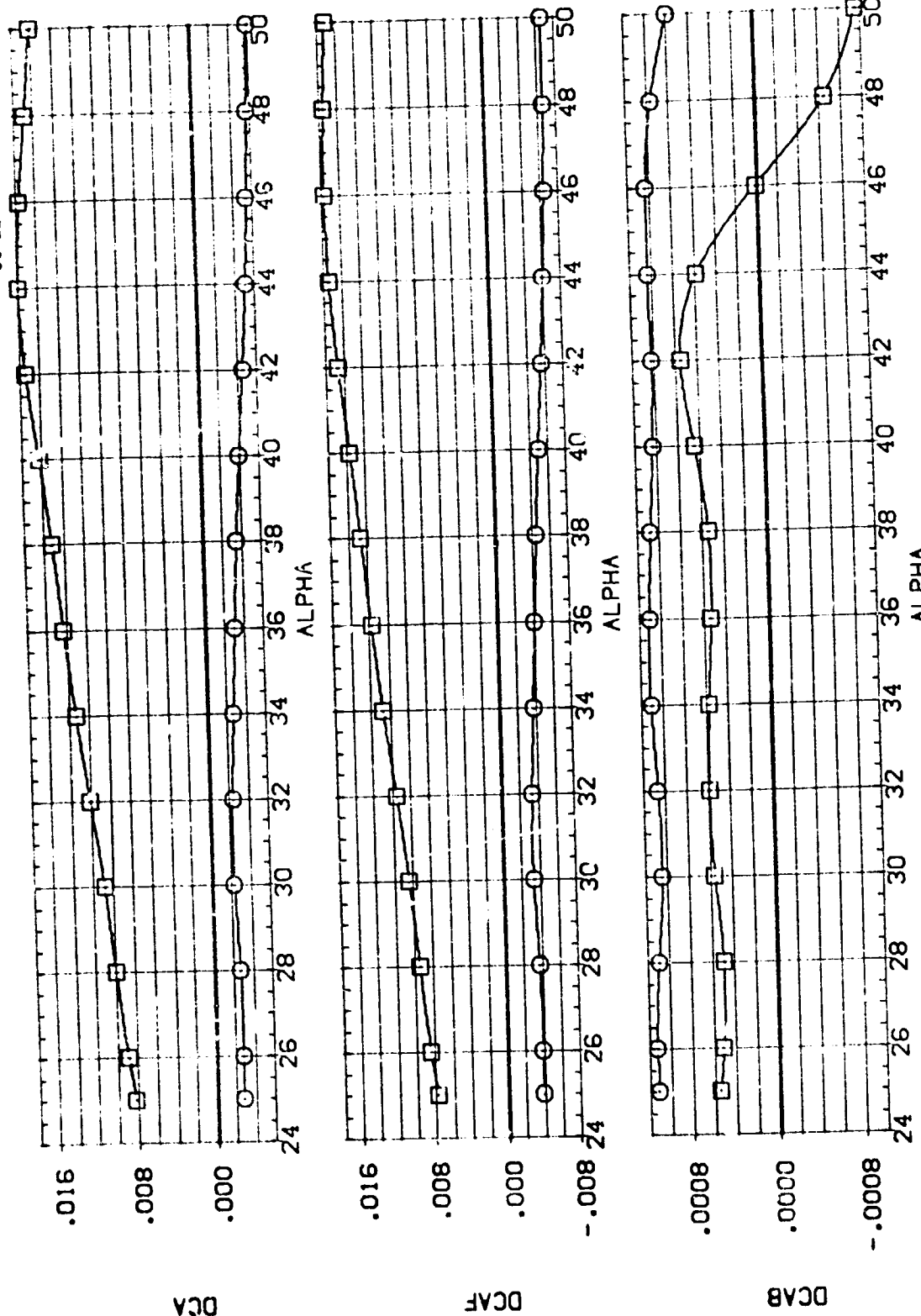


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

(A)MACH = 5.26

DATA SET SYMBOL: (FBX064) (FBX047)

CONFIGURATION DESCRIPTION: AYES 3.5-160 0A11B (B10F4C507H3-8)(V87E18)(V87S) AYES 3.5-160 0A11B (B10F4C507H3-8)(V87E18)(V87S)

DELBDP: -14.250 13.750

ELEVON: .000 .000

SPOBRK: 54.920 54.920

RUDDER: .000 .000

REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8100 N. BREF 936.6800 N. XRRP 1076.1800 N. YRRP .0000 N. ZRRP .0000 N. SCALE .0150

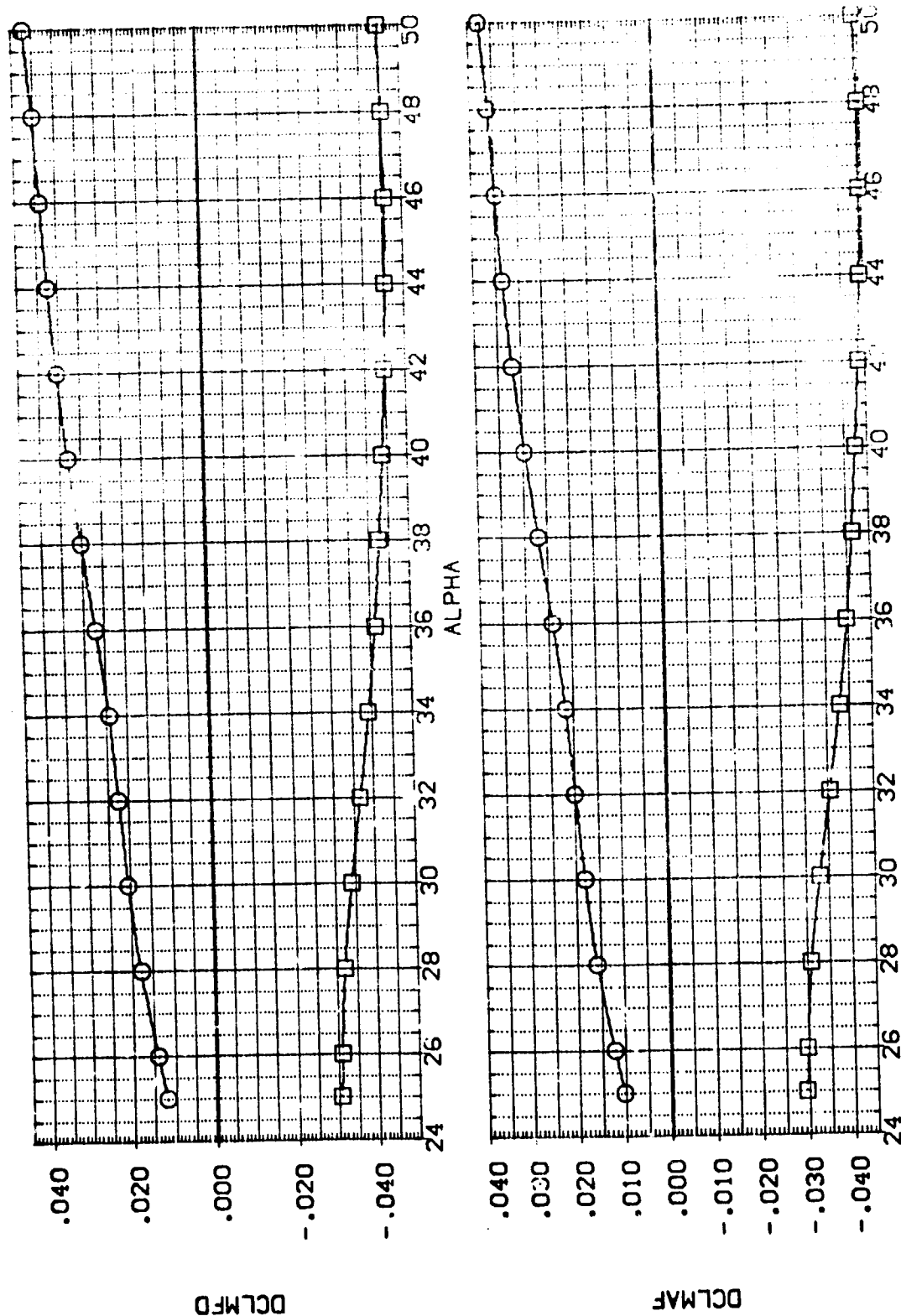
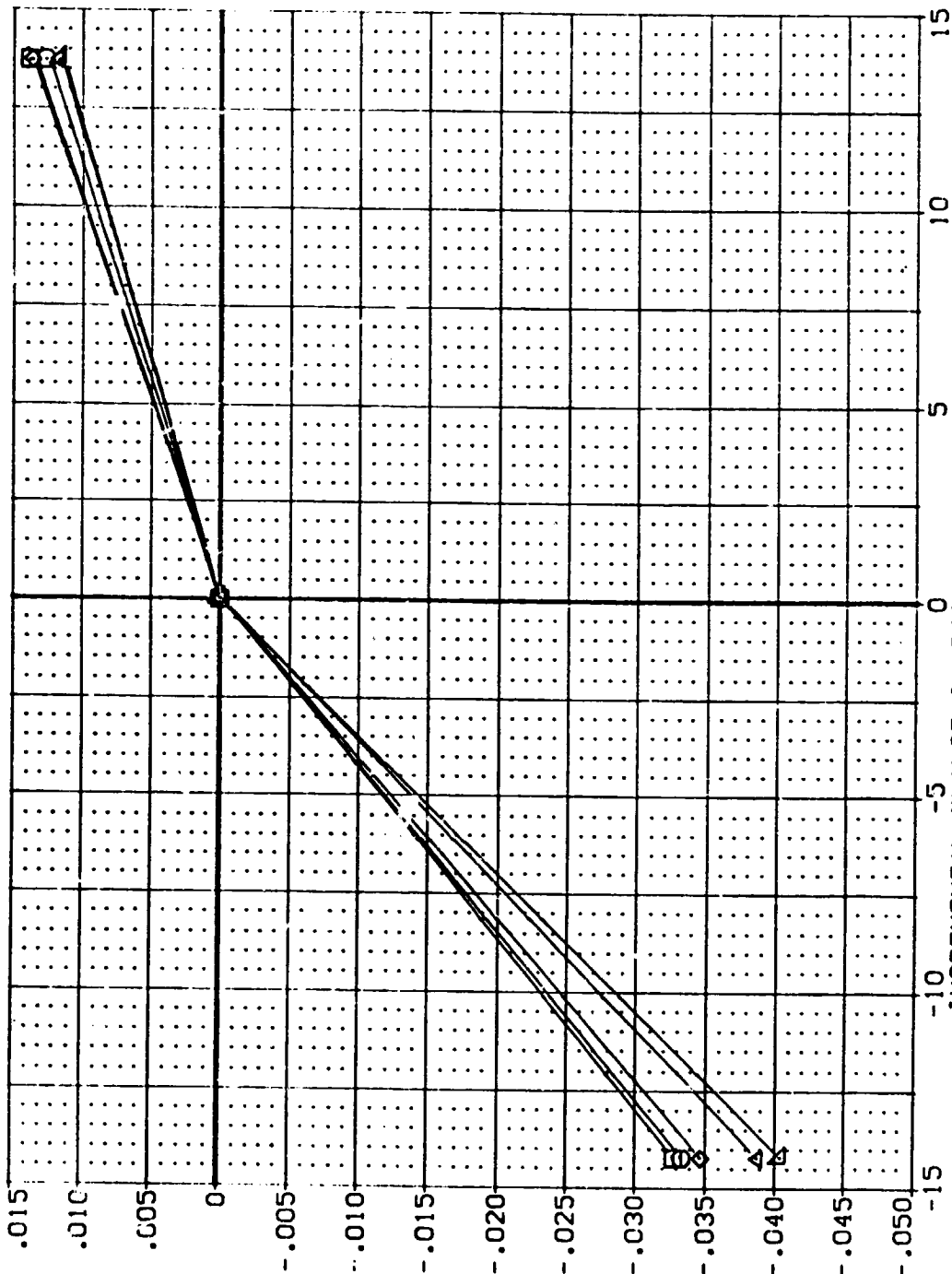


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

(A) MACH = 5.26

AMES 3.5-160 0A11B (810F4C507M3N8)(W87E18)(V5R5)(FBX847)

SYMBOL	ALPHA	ACH	PARAMETRIC VALUES	DATA SOURCE	REFERENCE INFORMATION
○	25.000	ELVN-L	5.260	DELBOF	SREF
□	26.000	RUDDER	.000	DELBOF	LREF
◇	28.000	ELEVON	.000	DELBOF	BREF
△	30.000		54.920	FBX064	XMRP
▽	32.000		.000	FBX063	YMRP
					ZMRP
					SCALE
					SQ.FT.
					IN.
					IN.
					IN.
					IN.
					IN.



INCREMENTAL CHANGE IN LIFT COEFFICIENT, DCL

FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

SYMBOL ○ □ ◇ △ ▴

ALPHA	PARAMETRIC VALUES			
34.000	MACH	5.260	BETA	
36.000	ELVN-L	.000	ELVN-R	
38.000	RUDDER	.000	SPOBRK	
40.000	ELEVON	.000	AIRLON	

	DATA SOURCE
.000	DELBOF
.000	-14.250
	13.750
\$4.920	
.000	

DATASET DELBOF
 FBX063 .000

REFERENCE INFORMATION	SQ.FT.
2690.0000	IN.
474.8100	IN.
936.6800	IN.
1076.4800	IN.
.0000	IN.
400.0000	IN.
.0150	IN.

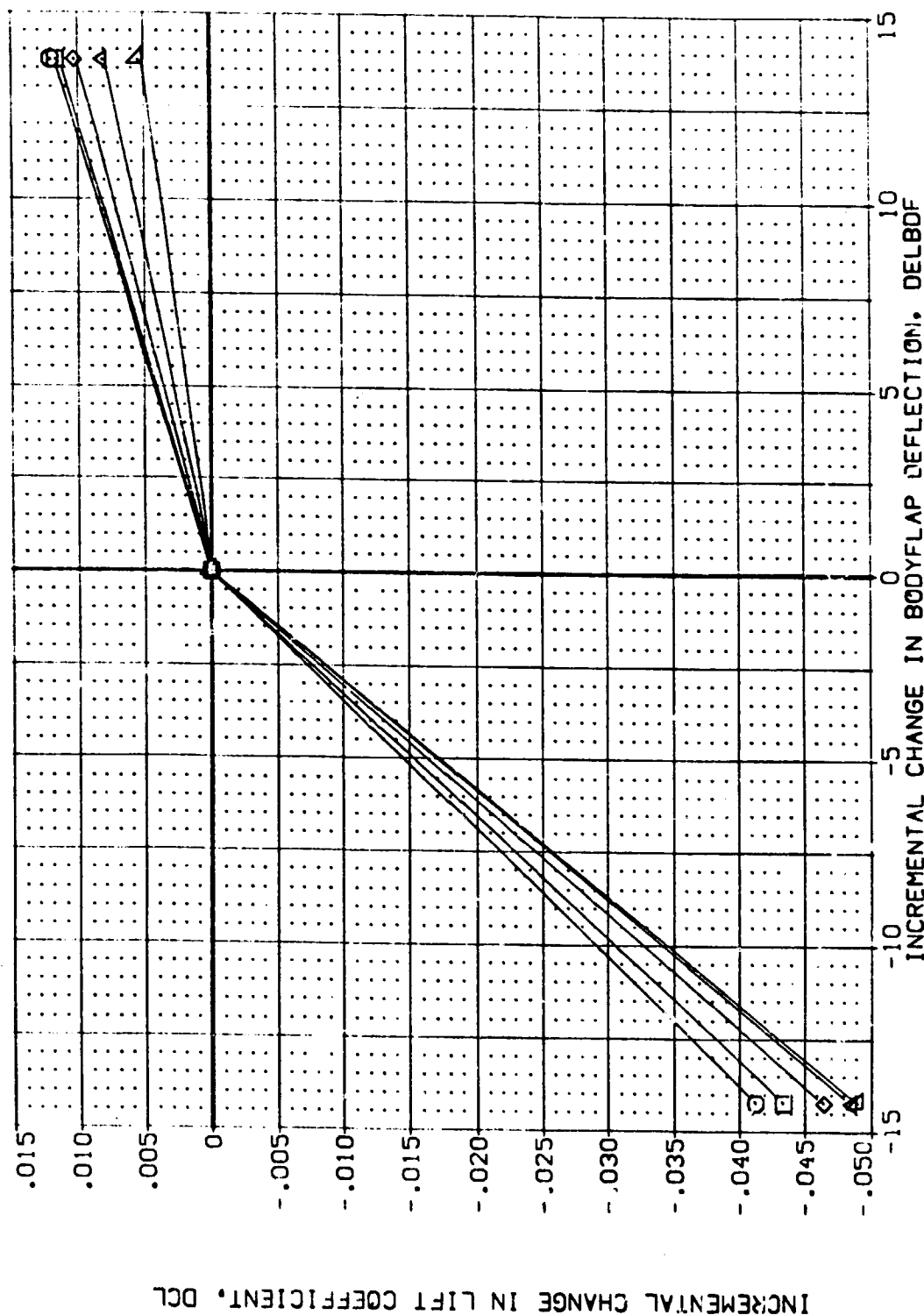


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (B10F4C5U7M3N8)(W87E18)(VSR5)(FBX847)

PARAMETRIC VALUES			DATA SOURCE		REFERENCE INFORMATION	
ALPHA	MACH	BETA	DELBOF	DELBOF	SREF	SO.FT.
25.000	5.260	.000	.000	.000	2690.0000	IN.
26.000	ELVN-L	.000	.000	.000	474.8100	IN.
28.000	RUDER	.000	.000	.000	936.6800	IN.
30.000	ELEVON	.000	.000	.000	1076.4800	IN.
32.000					400.0000	IN.
					400.0000	IN.
					SCALE	.0150

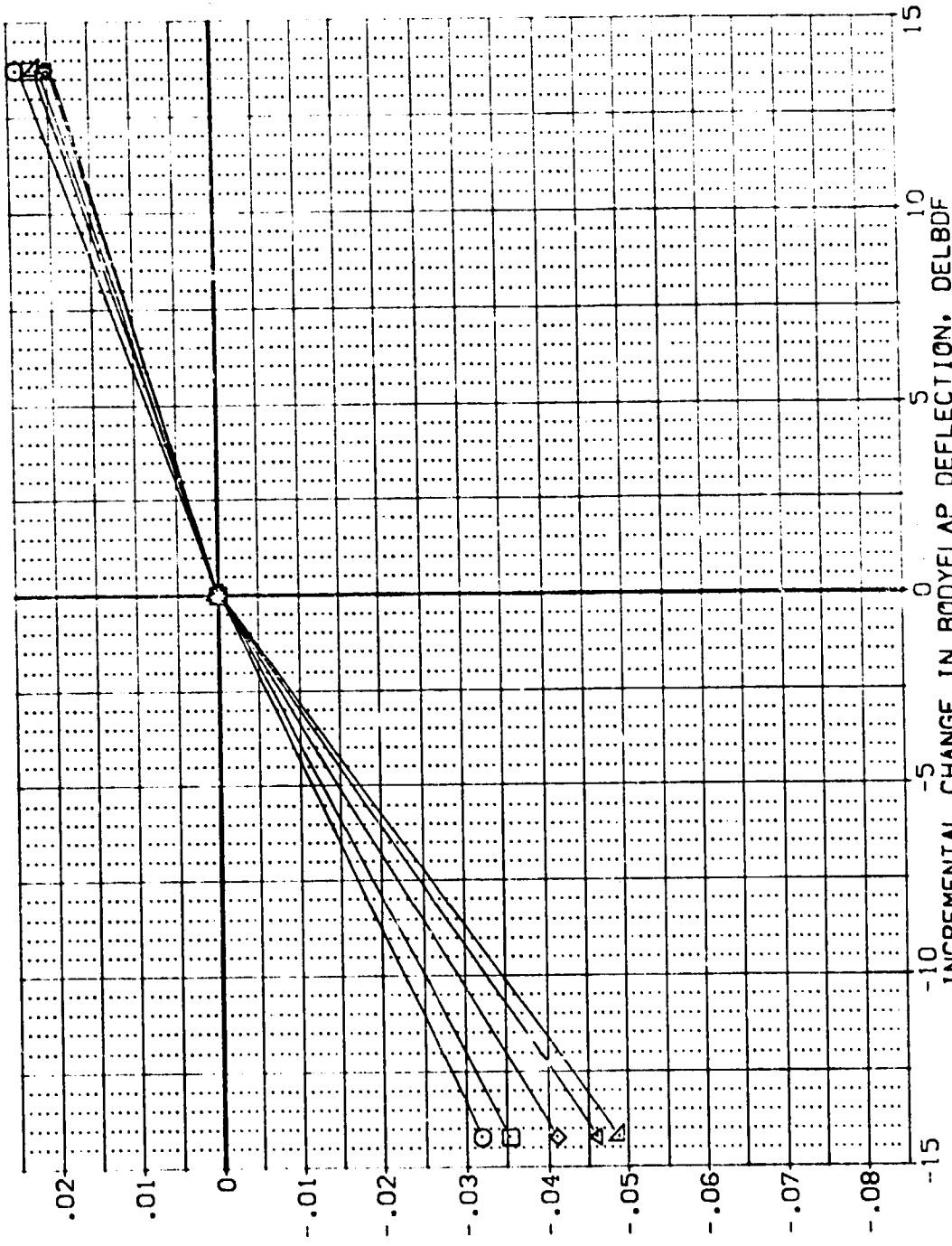


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5P5)(FBX847)

SYMBOL
○ □ ◇ △ ▽

ALPHA
34.000
36.000
38.000
40.000
42.000

MACH
CLIN-L
RUDDER
ELEVON

PARAMETRIC VALUES
5.260 BETA
.000 ELVN-R
.000 SPOBRK
.000 AILRON

.000 FBX847
.000 FBX064
54.920 FBX064
.000

DATA SOURCE
DELBOF
-14.250
13.750

DELBOF
.000
FBX063

REFERENCE INFORMATION
SREF 2690.0000
LREF 474.8100
BREF 936.6900
XMRP 1076.4800
YMRP .0000
ZMRP .0000
SCALE .0150

INCREMENTAL CHANGE IN NORMAL FORCE COEFFICIENT, CCN

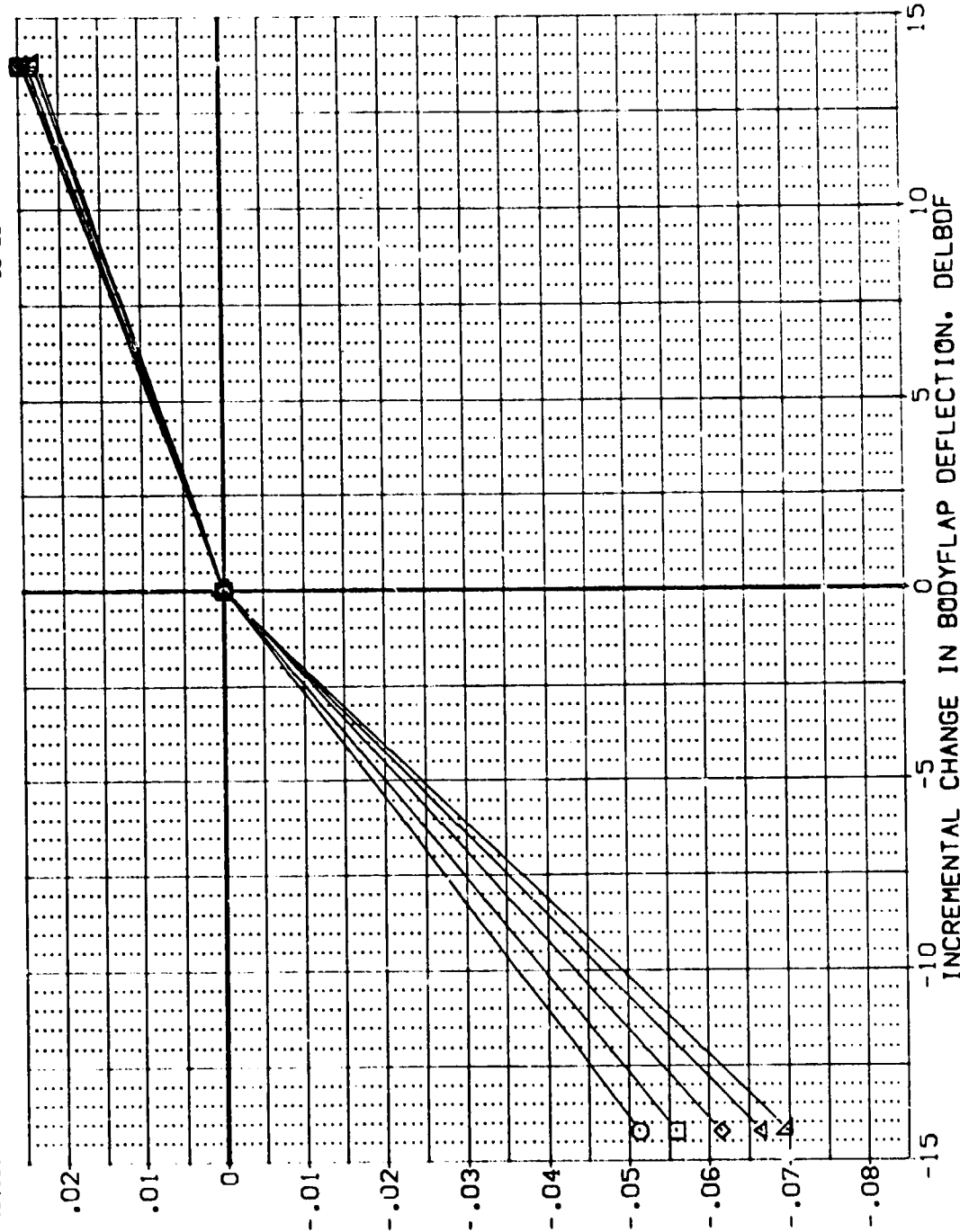


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (B10F4C507M3N8)(W87E18)(V5R5)(FBXB47)

SYMBOL		PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	5.260	BETA	.000	DELBOF	SREF	2690.0000
□	44.000	.000	ELVN-L	.000	FBXB47	LREF	474.8100
◇	46.000	.000	ELVN-R	.000	FBXB47	BREF	336.6800
△	48.000	.000	SPOSRK	54.920	FBXB47	XMRP	1076.4800
	50.000	.000	AIRLON	.000	FBXB47	YMRP	.0000
						ZMRP	400.0000
						SCALE	.0150

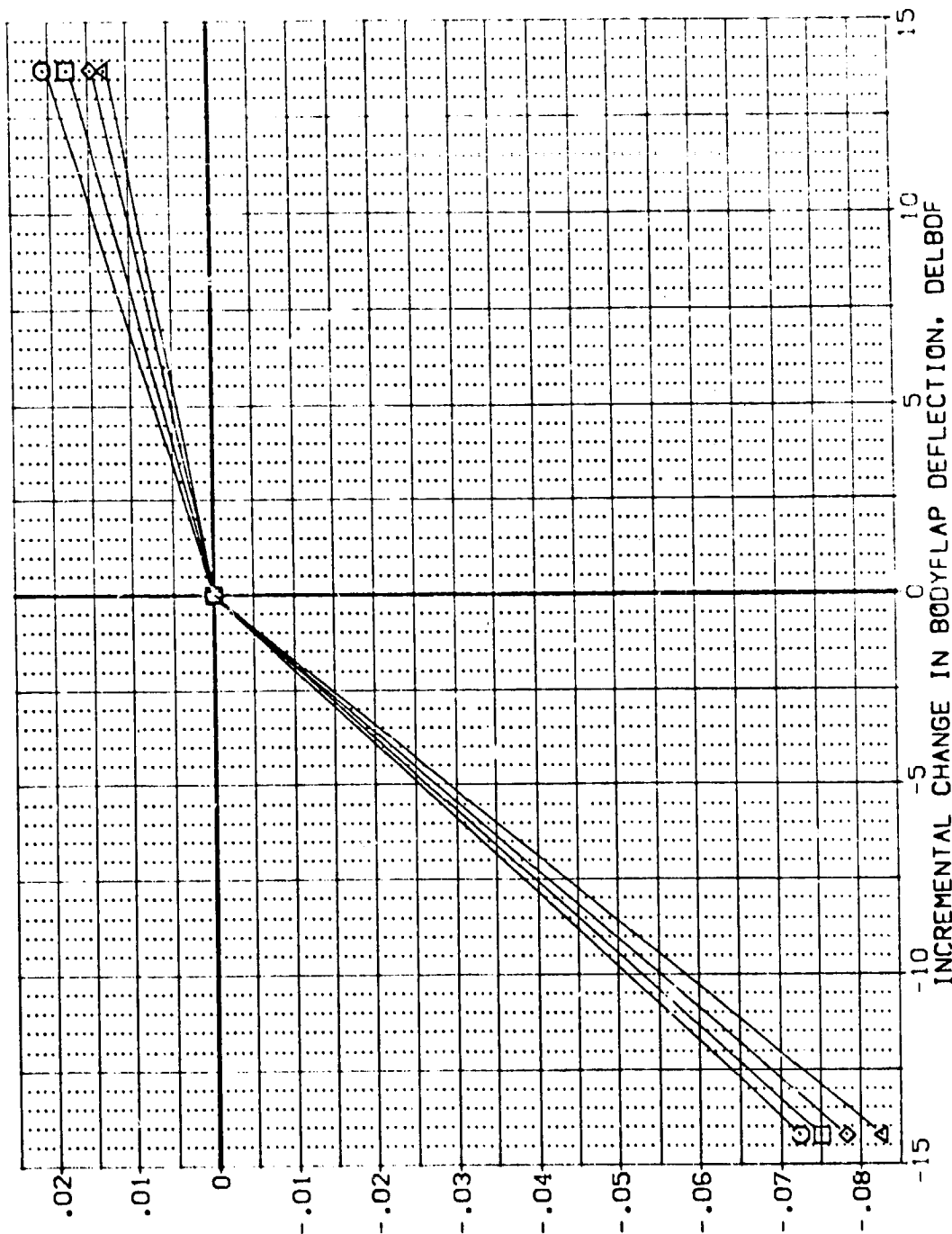







FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

SYMBOL     

ALPHA	HACH
25.000	ELVN-L
26.000	RUDDER
28.000	ELEVON
30.000	
32.000	

PARAMETRIC VALUES	BETA	ELVN-R	SPOBPK	AIRLON
760	00	.00	.000	

.000	DATASET
.000	FBX847
.920	FBX064
.000	

DATA SOURCE
DELBOF
-14.250
13.750

DATASET DELBOF
 FBX063 .000

REFERENCE INFORMATION		SO. FT.
SREF	2690.0000	IN.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.1800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

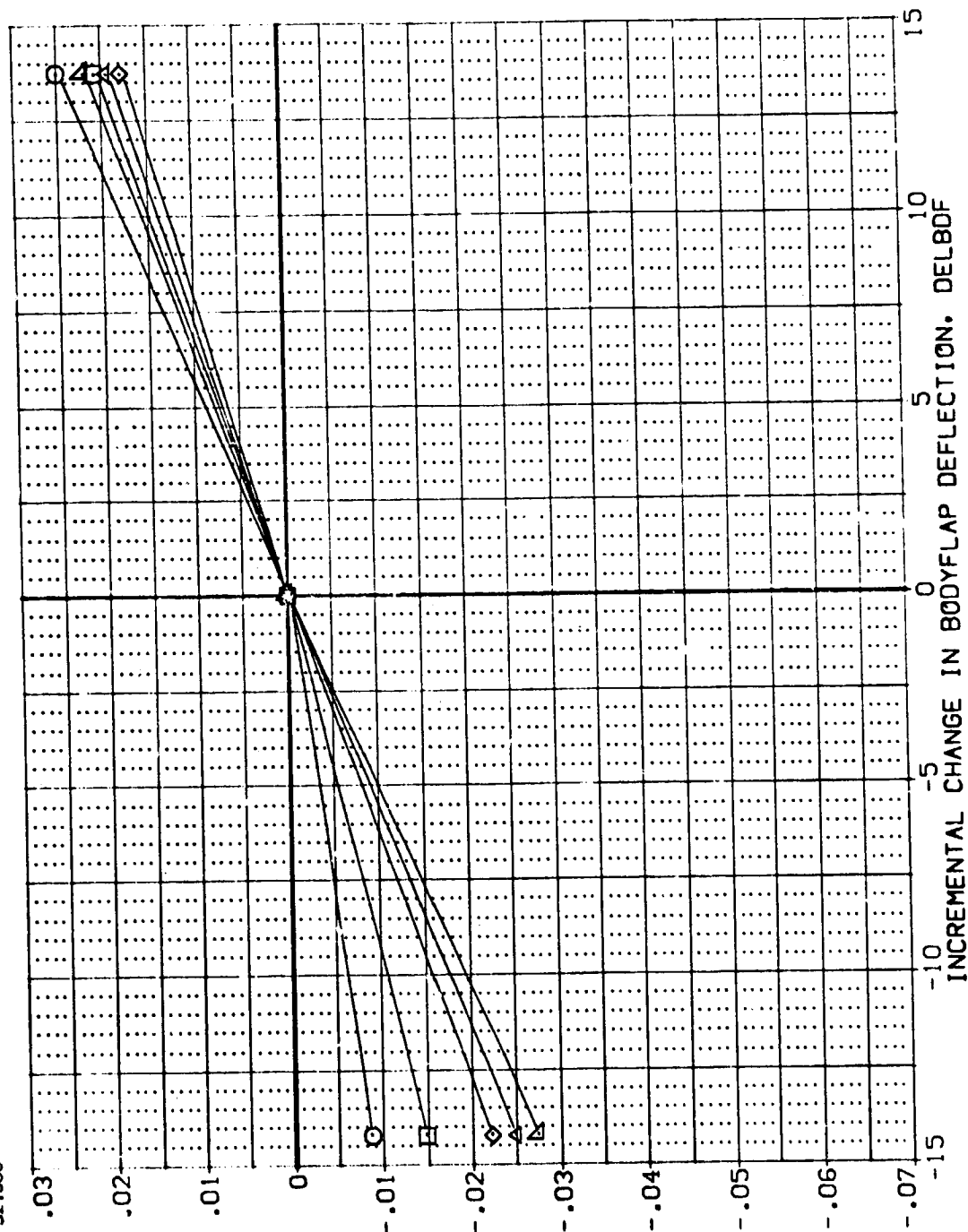


FIG. 4.C.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (B10F4C5D7M3N8)(W87E18)(V5R5)(FBXB47)

SYMBOL
 ○ □ ◇ △

ALPHA
 34.000
 36.000
 38.000
 40.000
 42.000

MACH
 ELVN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
 5.260 BETA
 .000 ELVN-R
 .000 SPOBRK
 .000 AILRON

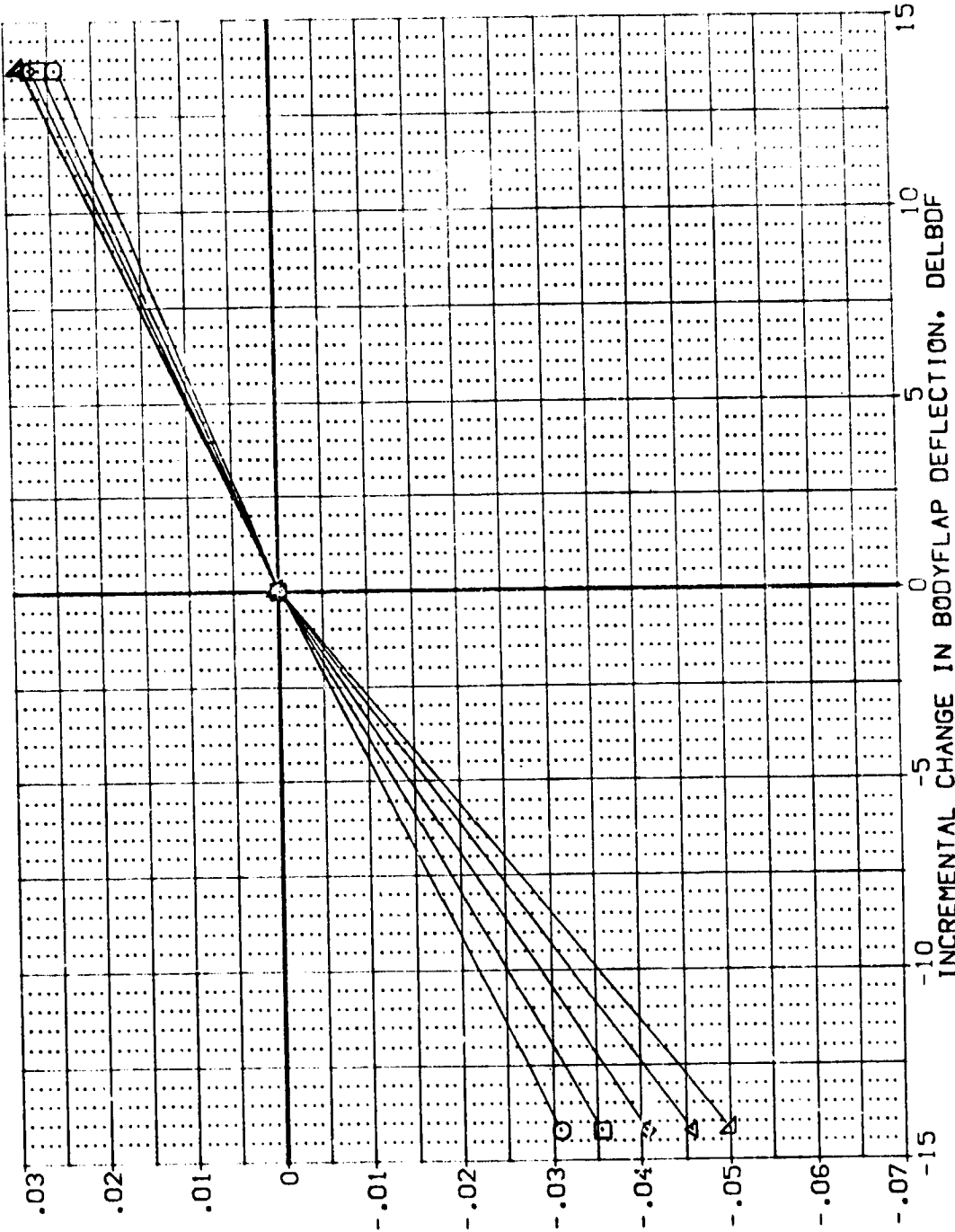
DATA SOURCE
 .000 DATASET
 .000 FBXB47
 54.920 FBX064
 .000

DELBOF
 -14.250
 13.750

DATASET
 FBX063

DELBOF
 .000

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150



INCREMENTAL CHANGE IN DRAG COEFFICIENT, CDD

FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBXB47)

SYMBOL
 ○ □ ◇ △

ALPHA
 44.000
 46.000
 48.000
 50.000

MACH
 ELVN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
 BETA
 ELVN-R
 SPOBRK
 AIRLON

DATA SOURCE
 DELBOF
 FBXB47
 FBX064

DELBOF
 FBX063
 FBX064

REFERENCE INFORMATION
 SREF
 LREF
 BREF
 XREF
 YREF
 ZREF
 SCALE

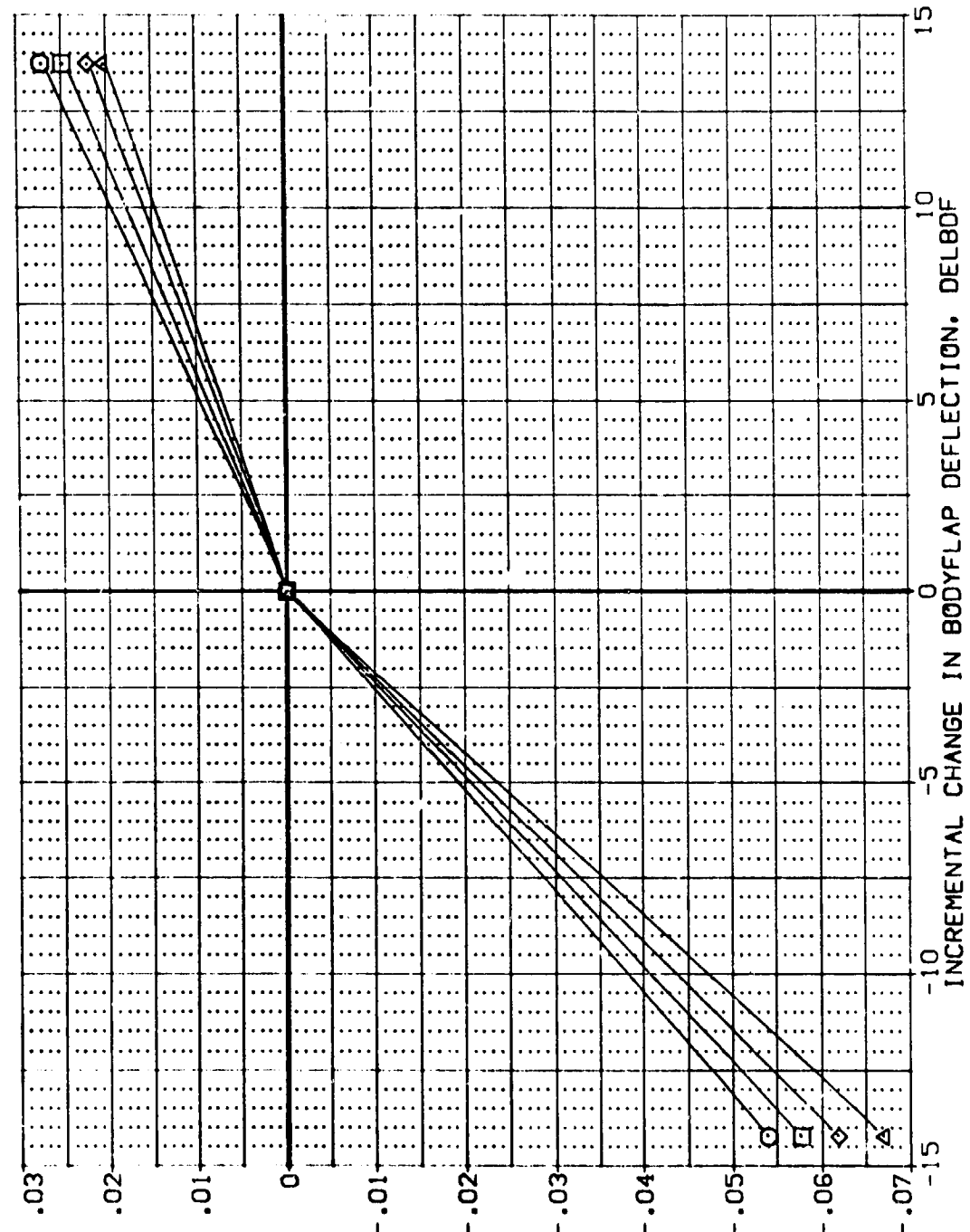


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBXB47)

SYMBOL	PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION			
	ALPHA	MACH	BETA	ELVN-R	DELBOF	DELBOF	SREF	LREF	SC.FT.	
□	25.000	ELVN-L	.000	SPDRK	-14.250	.000	2690.0000	474.8100	IN.	
◇	26.000	RUDER	.000	ATLRN	13.750	.000	936.5800	1076.4800	IN.	
△	28.000	ELEVON	.000				VMRP	400.0000	IN.	
▽	30.000						ZMRP		IN.	
▽	32.000						SCALE	.0150		

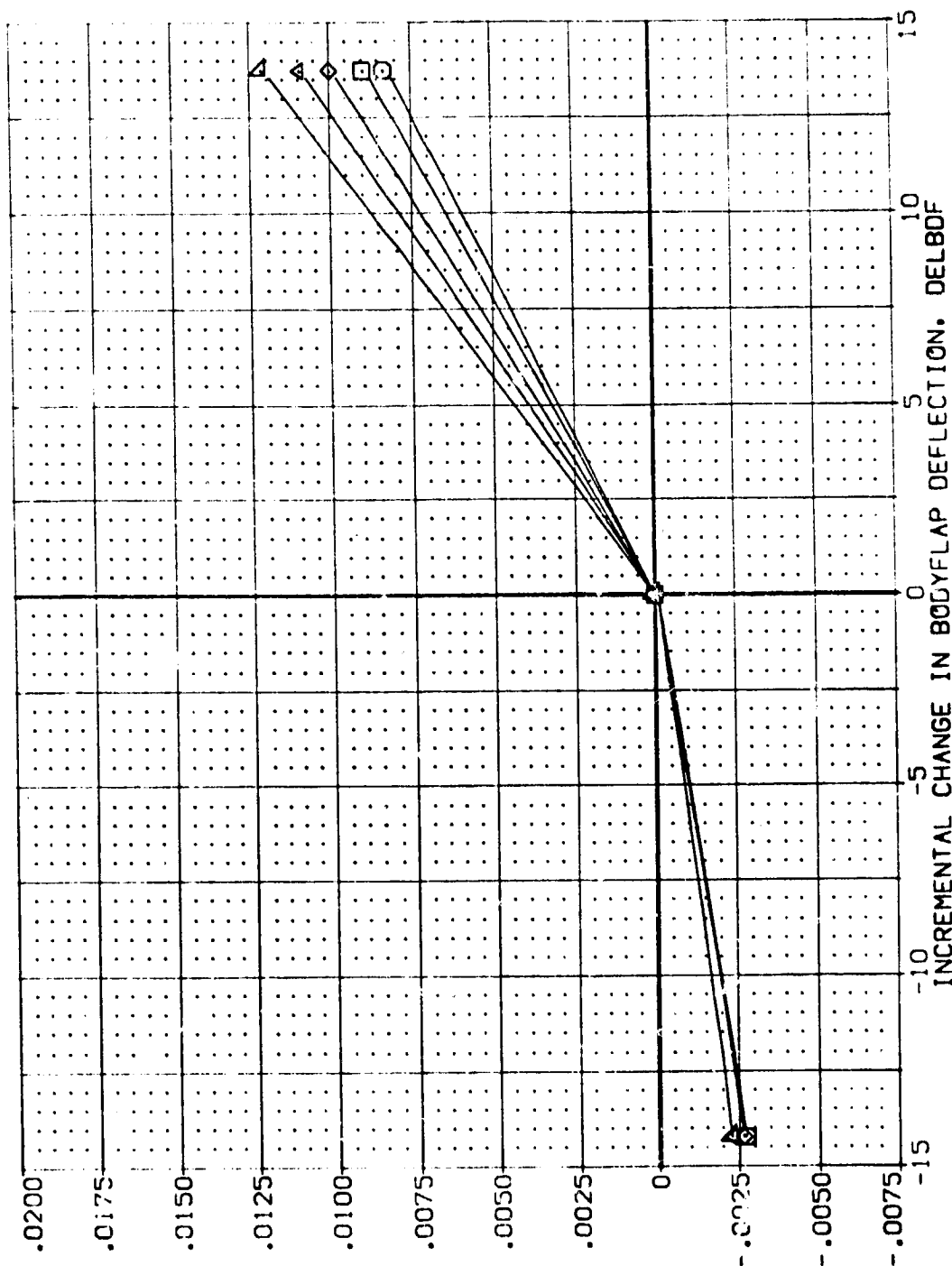


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBXB47)

REFERENCE INFORMATION
 SQ.FT. 2650.0000
 IN. 474.8100
 IN. 936.6800
 IN. 1076.1800
 IN. 400.0000
 IN. 400.0000
 SCALE .0157

PARAMETRIC VALUES
 BETA 5.260
 ELVN-R .000
 SPDRK .000
 AILRON .000

DATA SOURCE
 DELBOF -14.250
 FBXB47 .000
 FBXB64 54.920
 FBXB63 .000

ALPHA 34.000
 ELVN-L 36.000
 RUDDER 38.000
 ELEVON 40.000
 42.000

SYMBOL
 ○
 □
 ◇
 △
 ▽

INCREMENTAL CHANGE IN AXIAL FORCE COEFFICIENT, DCA

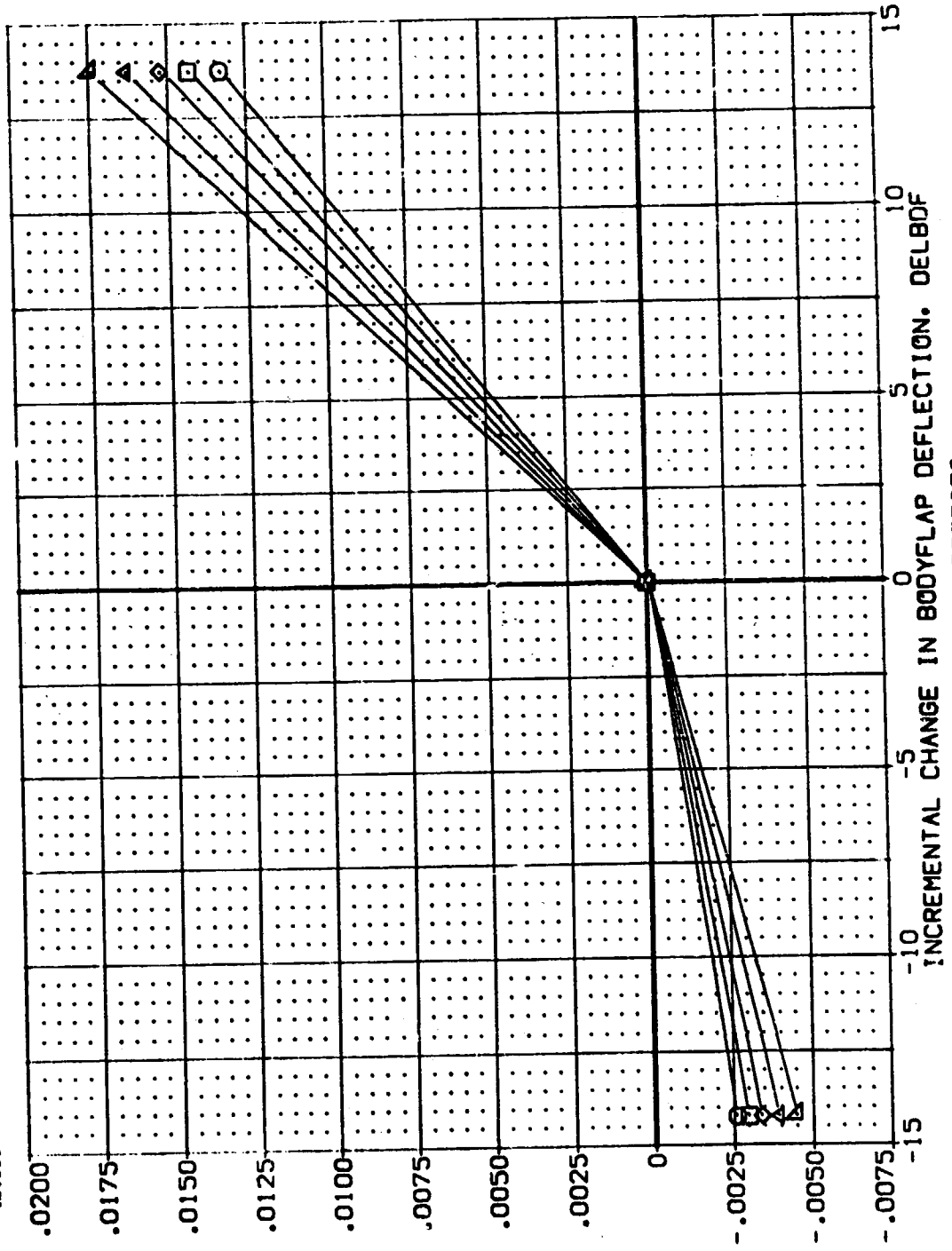


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBXB47)

SYMBOL	PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION			
	ALPHA	MACH	BETA	ELVN-R	DELBOF	DELBOF	SREF	LREF	SO.FT.	IN.
○	44.000	5.260	.000	ELVN-R	.000	FBXB47	.000	474.8100	2690.0000	IN.
□	46.000	.000	.000	SPOBRK	-14.250	FBXB47	.000	936.6800	474.8100	IN.
◇	48.000	.000	.000	ATLORN	13.750	FBXB47	.000	1076.4800	936.6800	IN.
△	50.000	.000	.000	ATLORN	.000	FBXB47	.000	400.0000	1076.4800	IN.
								400.0000	400.0000	IN.
								SCALE	.0150	

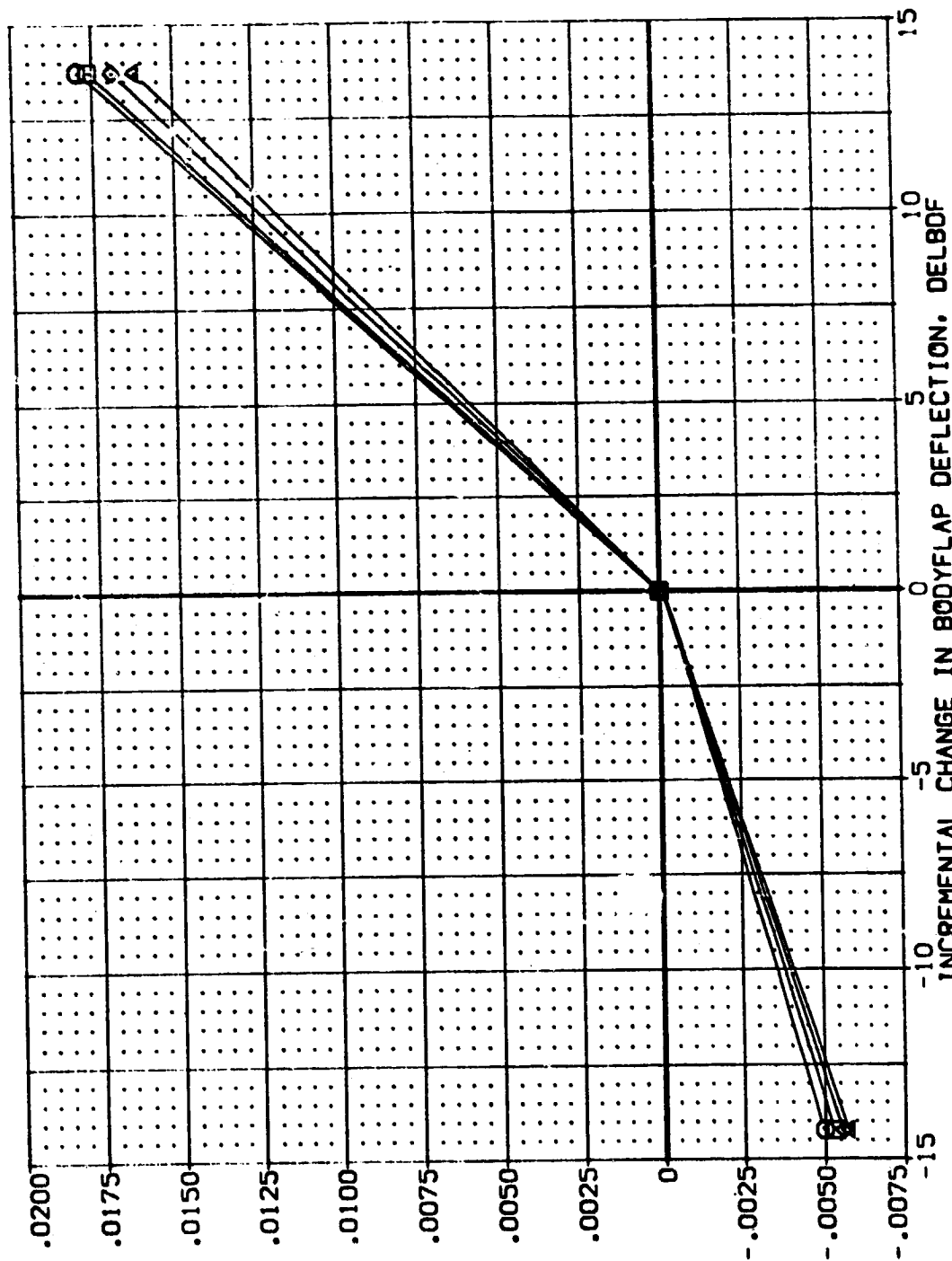


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBX847)

ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DELBOF	DELBOF	DELBOF	REFERENCE INFORMATION
25.000	5.260	BETA	.000	FBX847	.000	2690.0000	SO.FT.
26.000	.000	ELVN-L	.000	FBX847	.000	474.8100	IN.
28.000	.000	SPDRK	54.920	FBX064	.000	936.5800	IN.
30.000	.000	AILRON	.000		.000	1076.4800	IN.
32.000						400.0000	IN.
						SCALE	.0150

INCREMENTAL CHANGE IN AFT PITCHING MOMENT COEFFICIENT, DCLMAF

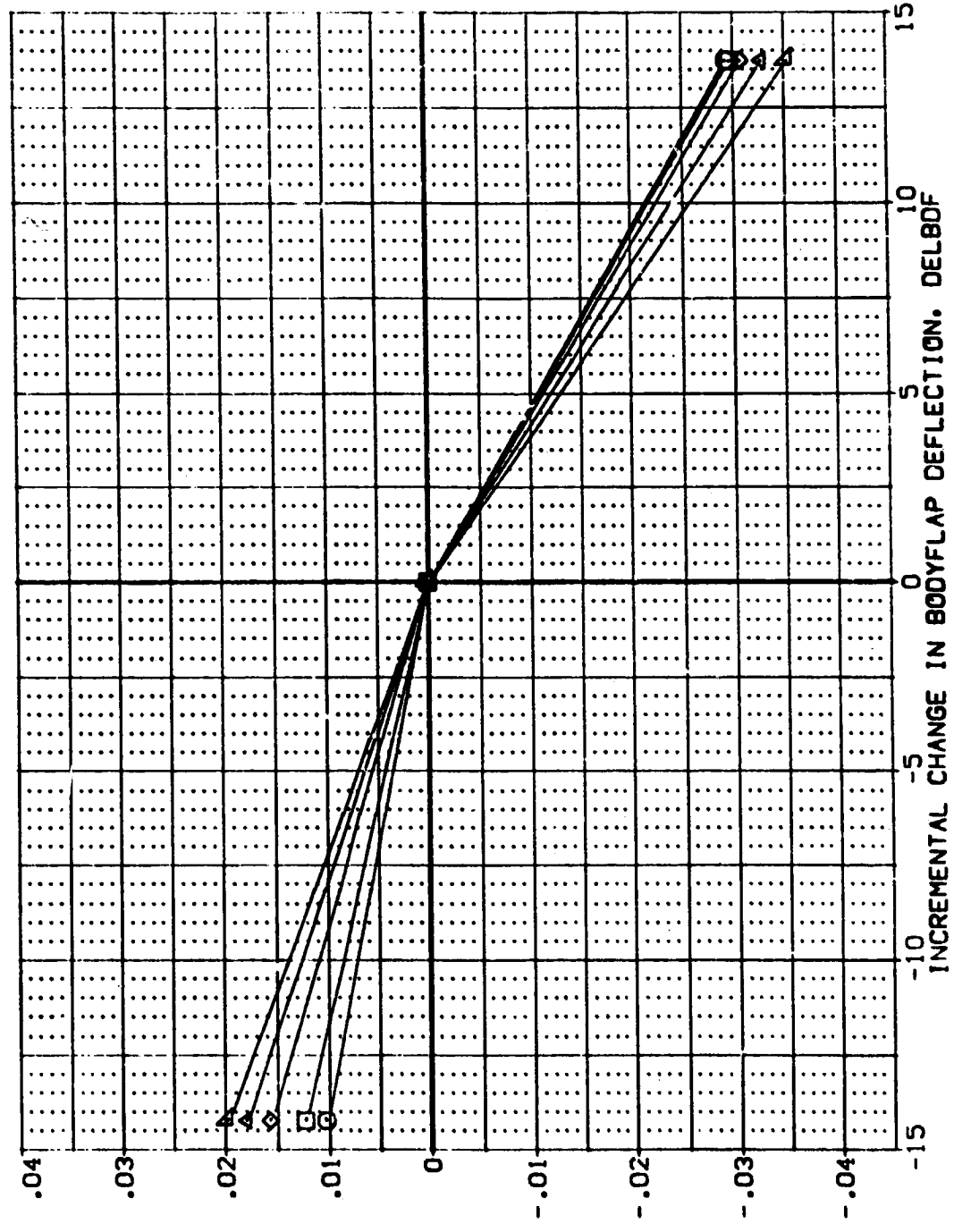


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX847)

SYMBOL
 □
 ◇
 △
 ▽

ALPHA
 34.000
 36.000
 38.000
 40.000
 42.000

MACH
 ELVN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
 5.260 BETA
 .000 ELVN-R
 .000 SPOBRK
 .000 AILRON

DATA SOURCE
 DELBOF
 -14.250
 13.750

FBX847
 FBX064

DELBOF
 .000
 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE 400.0150

INCREMENTAL CHANGE IN AFT PITCHING MOMENT COEFFICIENT, DCLMAF

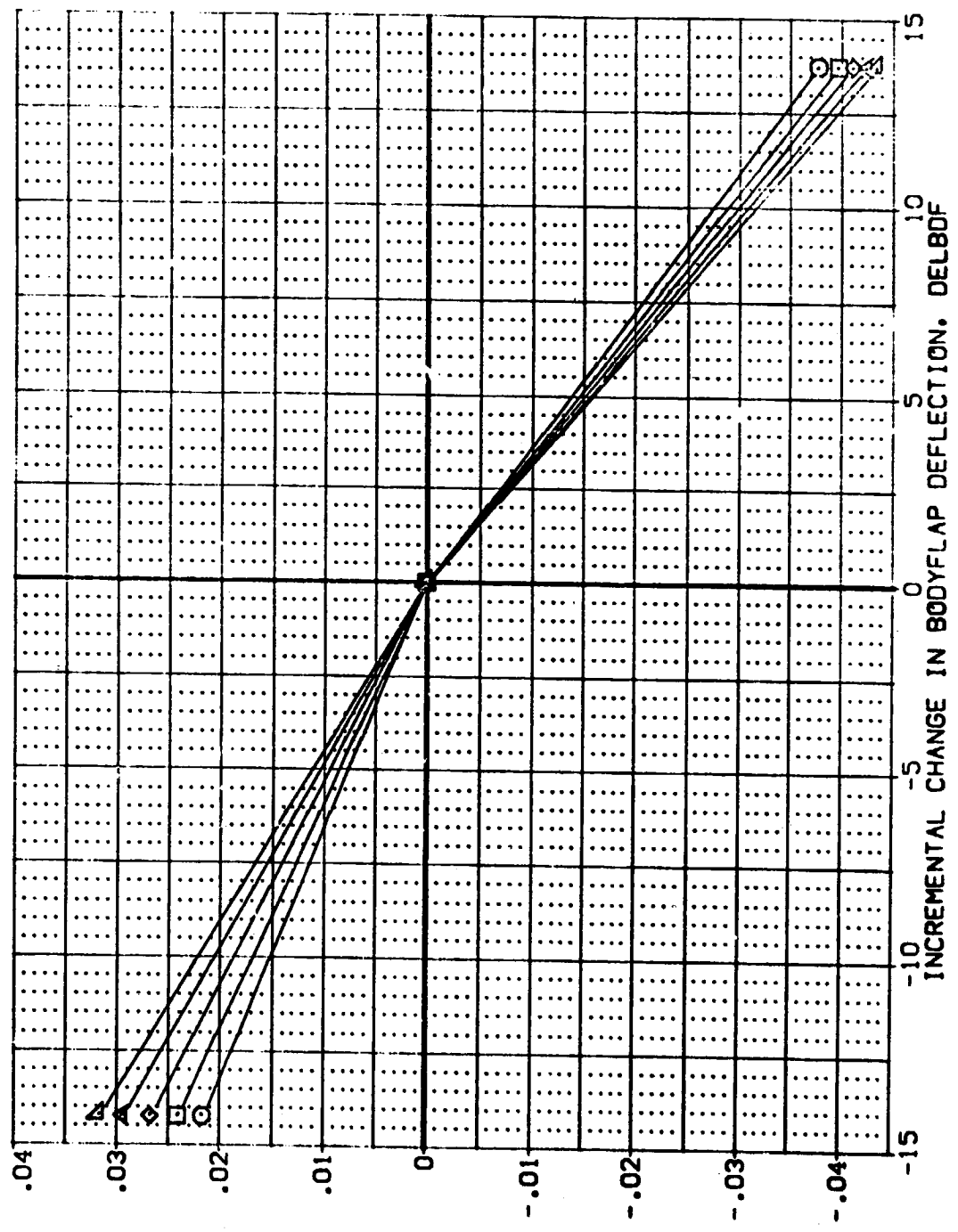


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBX847)

SYMBOL	ALPHA	MACH	PARAMETRIC VALUES	DATA SOURCE	DELBOF	DELBOF	REFERENCE INFORMATION
○	44.000	5.260	BETA	.000	FBX847	.000	SREF 2690.0000
◇	46.000	.000	ELVN-R	.000	FBX847	.000	LREF 474.8100
◇	48.000	.000	SPOBPK	54.920	FBX064	.000	BREF 936.6800
△	50.000	.000	AI_RON	.000	FBX064	.000	YREF 1076.4800
							ZREF 400.0000
							SCALE .0150

INCREMENTAL CHANGE IN AFT PITCHING MOMENT COEFFICIENT, DCLMAF

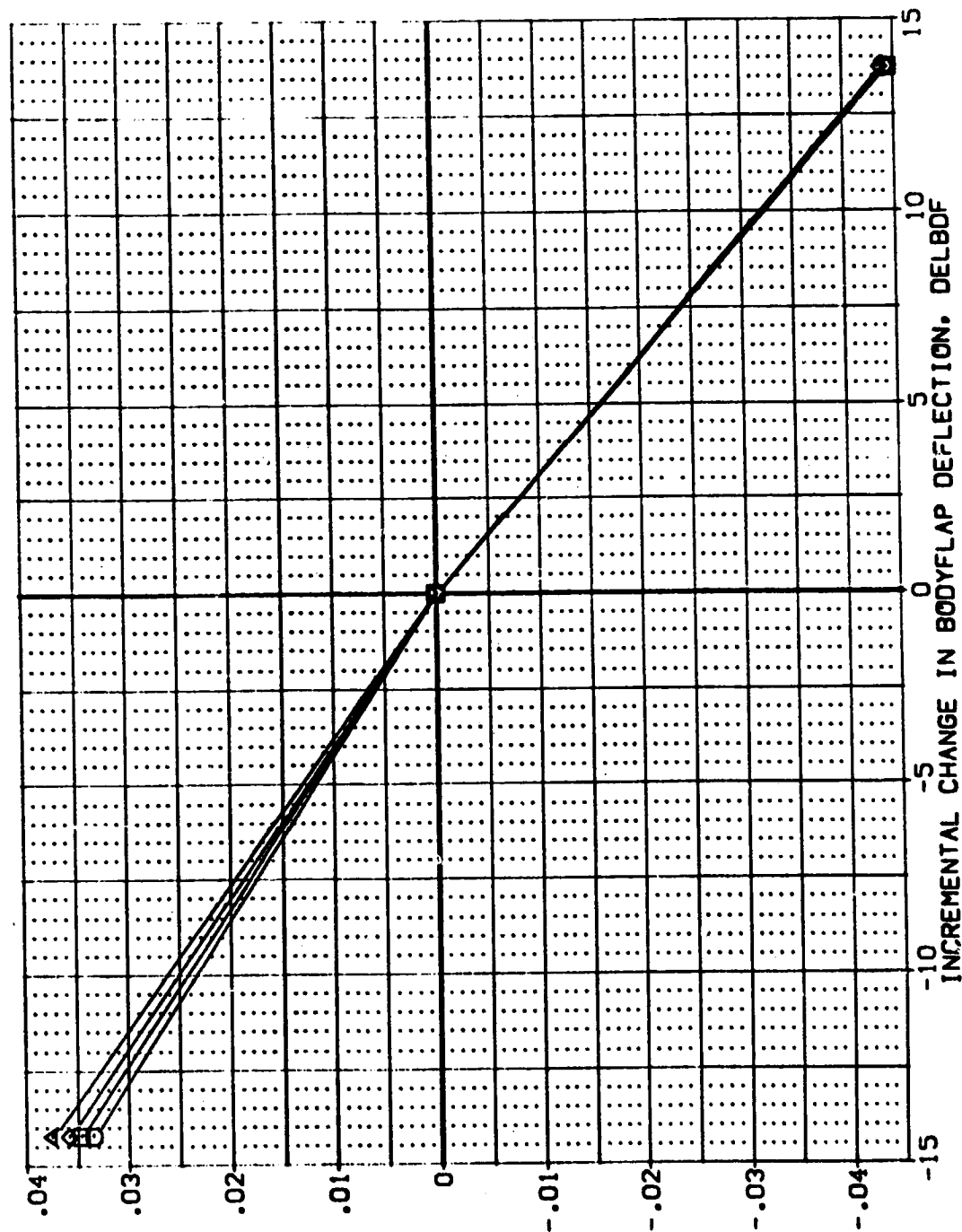


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBXB47)

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XTRP 1076.4800 IN.
 YTRP .0000 IN.
 ZTRP 400.0000 IN.
 SCALE .0150

DATA SOURCE

PARAMETRIC VALUES
 ALPHA 25.000 MACH 5.260 BETA .000
 26.000 ELVN-L .000 ELVN-R .000
 28.000 RUDDER .000 SPOBRK 54.920
 30.000 ELEVON .000 AILRON .000
 32.000

SYMBOL
 ▽ ◆ □ □ ▽

INCREMENTAL CHANGE IN FORWARD PITCHING MOMENT COEFFICIENT, DCLMFD

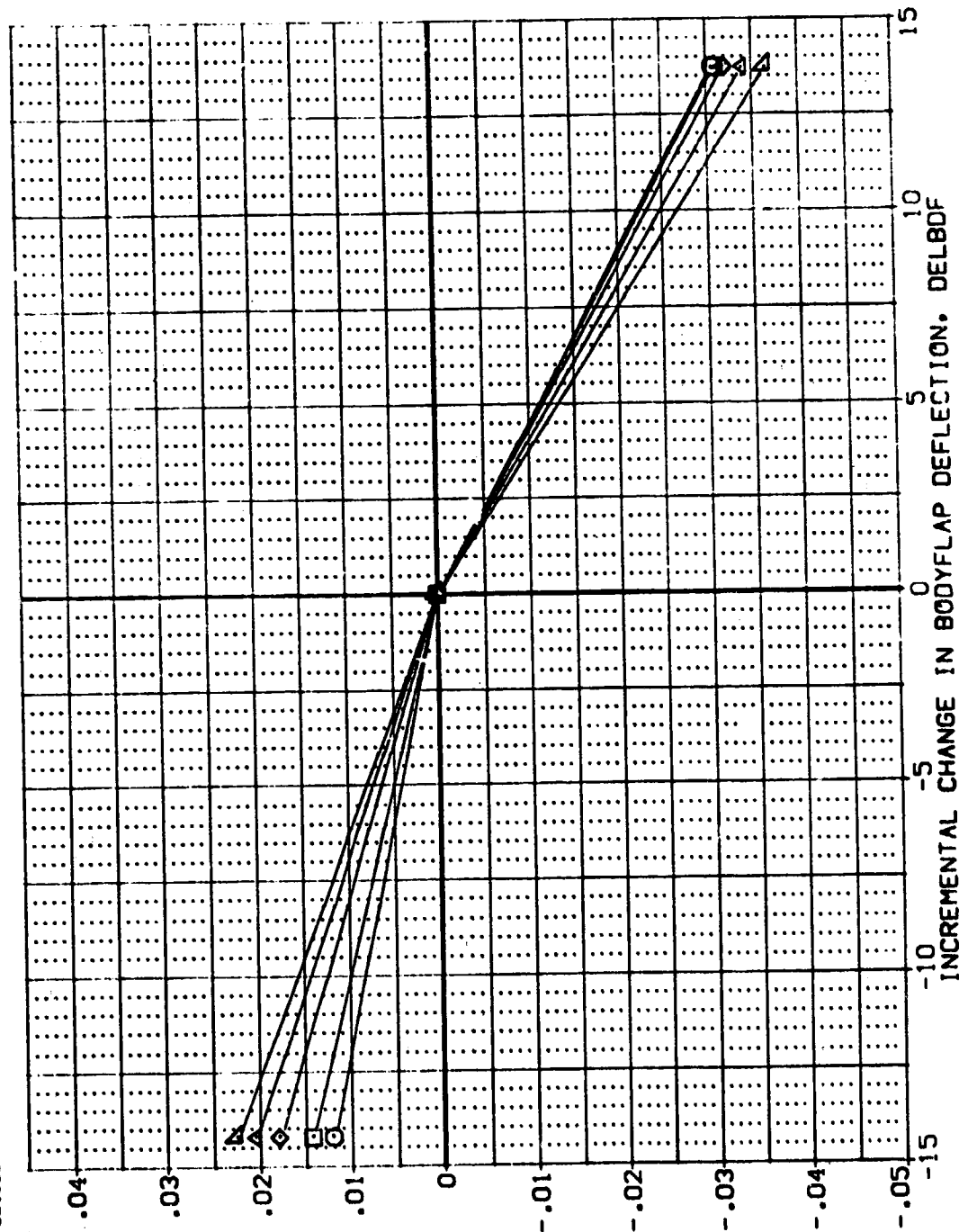







FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

Symbol     

ALPHA	HACH
34.000	ELVN-L
36.000	RUDDER
38.000	ELEVON
40.000	
42.000	

PARAMETRIC VALUES	BETA	ELVN-R	SPOBK	ALLRN
5.260	.000	.000	.000	

.000	DATASET
.000	FBX847
.920	FBX064
.000	

DATA SOURCE	
DELBOF	
-14.250	
13.750	

DATA SET
FBX063

000.
-08730

REF
LREF
BREF
XREF

REFERENCE INFORMATION	SC.FT.
2690.0000	IN.
474.8100	IN.
936.6800	IN.
1076.4800	IN.
0000	IN.
400.0000	IN.
.0150	

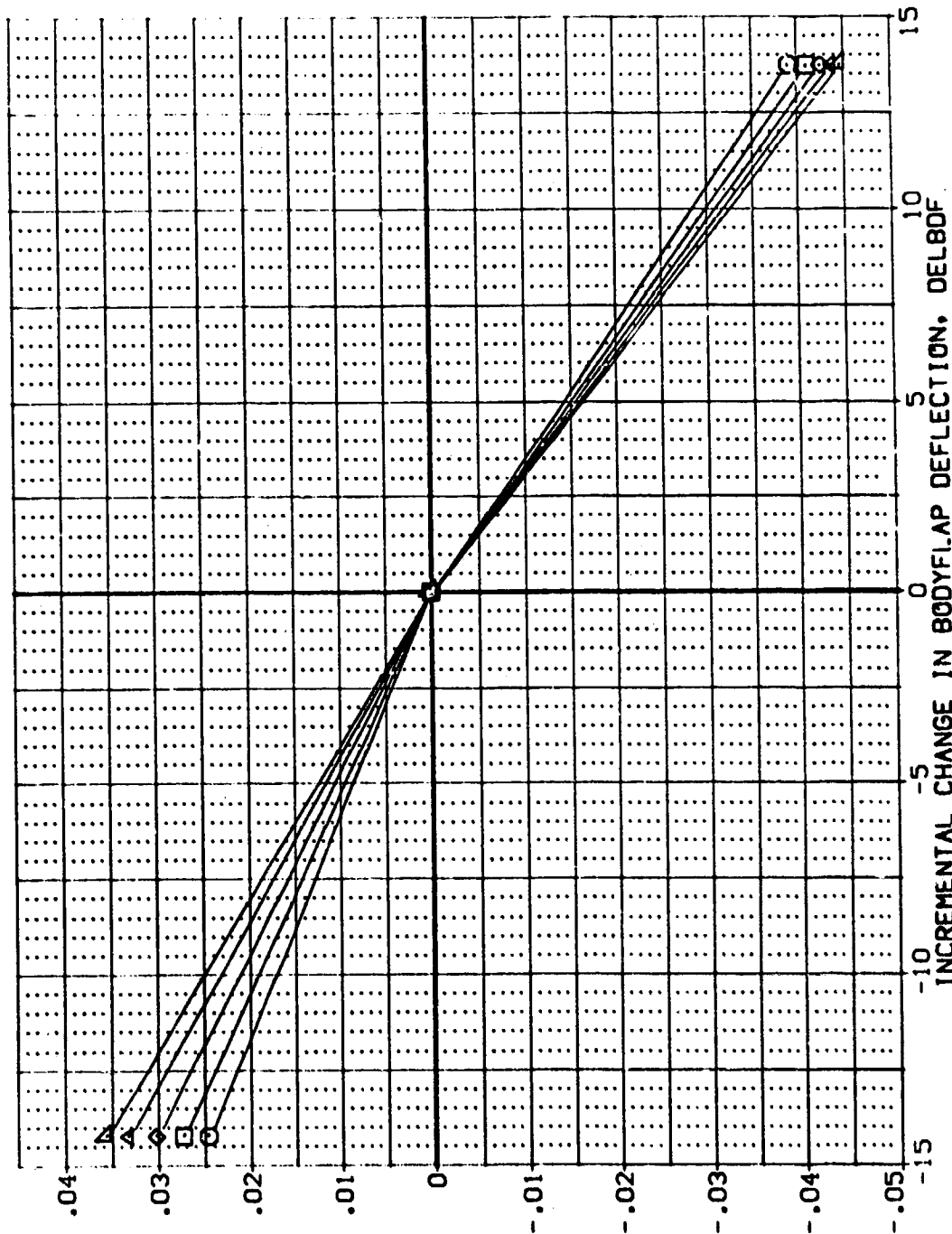


FIG. 4.D.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBXB47)

SYMBOL
 ○
 ◇
 □
 △

ALPHA
 44.000
 46.000
 48.000
 50.000

MACH
 ELWN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
 BETA
 ELWN-R
 SPOBRK
 AILRON

.000
 .000
 .000
 .000

.000
 .000
 .000

.000
 .000
 .000

DATA SOURCE
 DELBOF
 FBXB47
 FBX064
 FBX063

REFERENCE INFORMATION
 SQ.FT.
 2650.0000
 474.8100
 936.6900
 1076.4900
 400.0000
 400.0000
 .0150

INCREMENTAL CHANGE IN FORWARD PITCHING MOMENT COEFFICIENT, DCLMFD

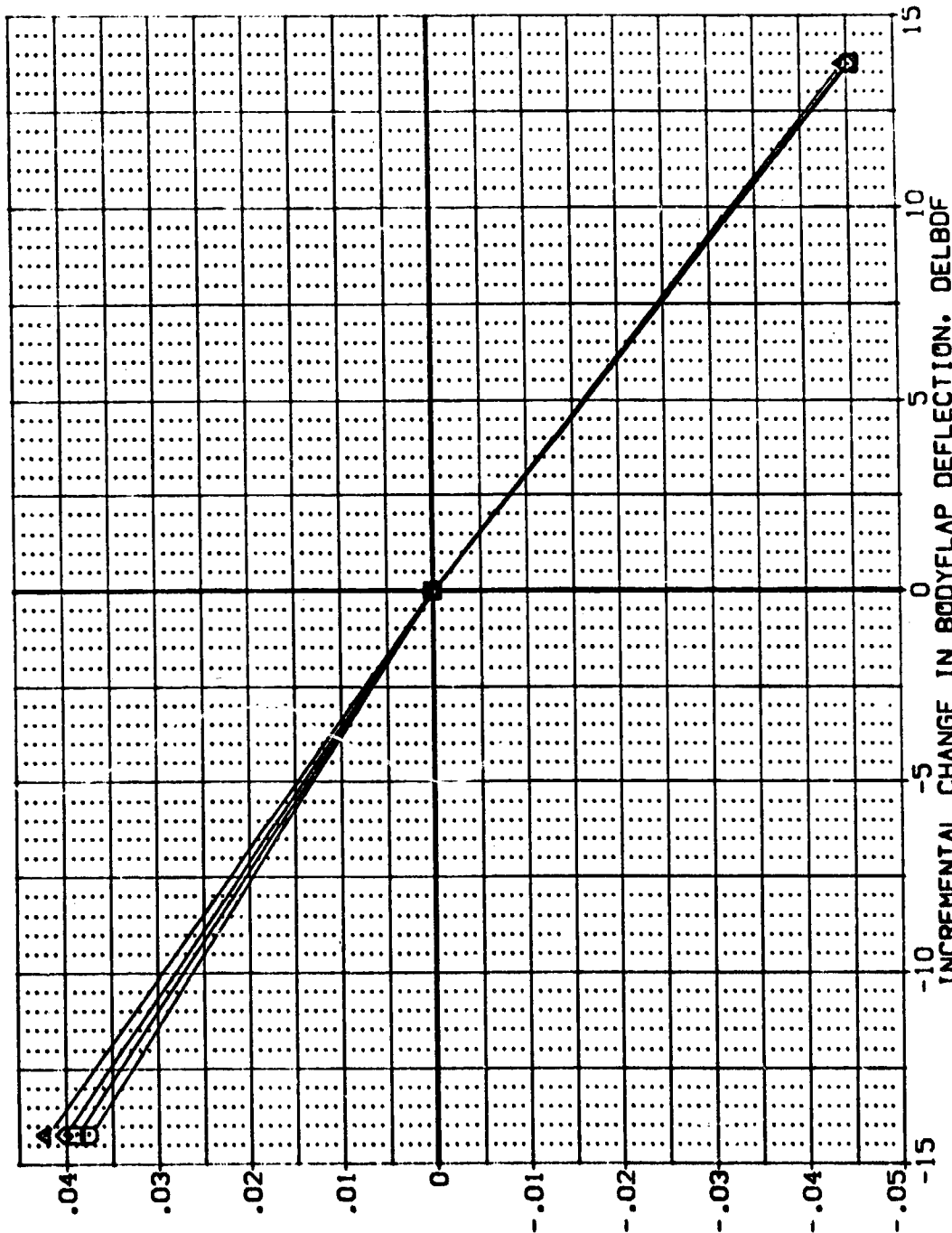
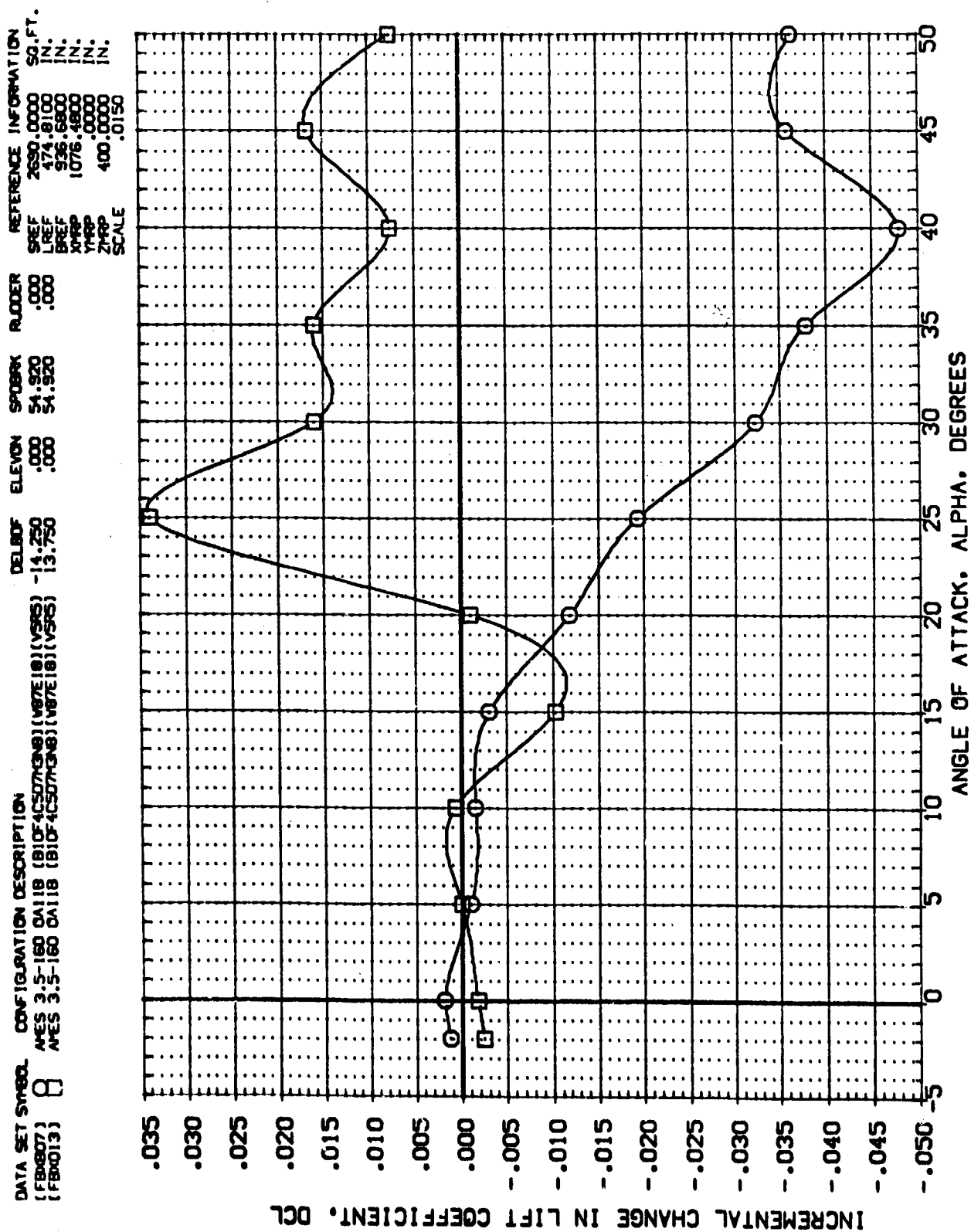
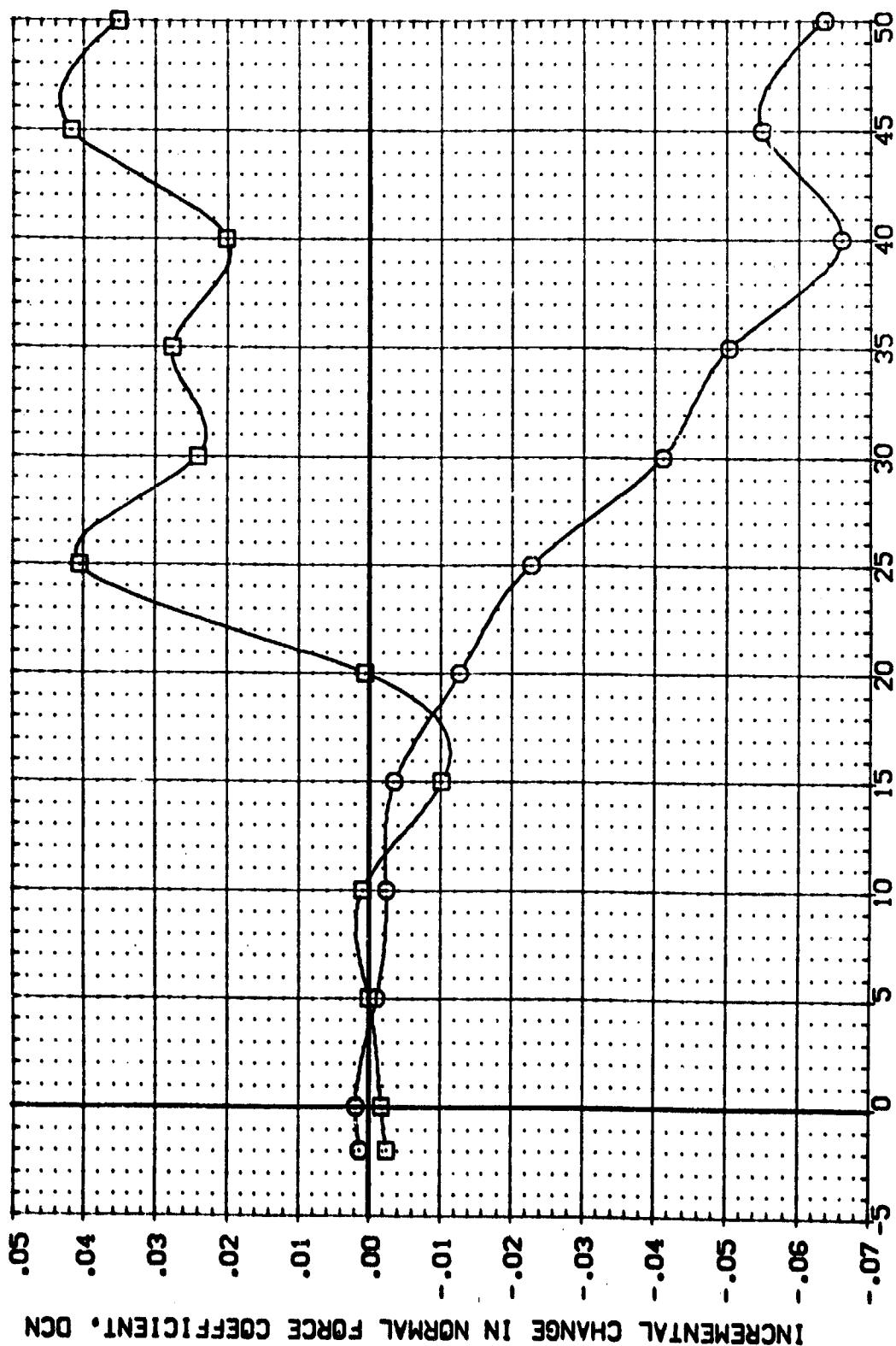


FIG. 4.0.1 MACH 5.26 INCREMENTAL BODYFLAP EFFECTS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELBOF	ELEVON	SPDRBK	RUDDER	REFERENCE INFORMATION
(FBK007)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V87E18)	-14.250	.000	54.520	.000	SREF 2650.0000 SQ.FT.
(FBK013)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V87E18)	13.750	.000	54.520	.000	LREF 474.8100 IN.
						BREF 936.5800 IN.
						XREF 1076.4800 IN.
						YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150



ANGLE OF ATTACK, ALPHA, DEGREES

FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

(A)MACH = 7.32



DATA SET SYMBOL: (FUR007) (FUR013)

CONFIGURATION DESCRIPTION:
 ASES 3.5-160 OA118 (810°4C507G48)(V87E181(V585)
 ASES 3.5-160 OA118 (810°4C507G48)(V87E181(V585)

DELBOF: -14.250
 [3.750]

ELEVON: .000
 .000

SPDRBK: 54.920
 54.920

RUDER: .000
 .000

REFERENCE INFORMATION:
 SREF: 2690.0000 SD.FT.
 LREF: 474.6100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

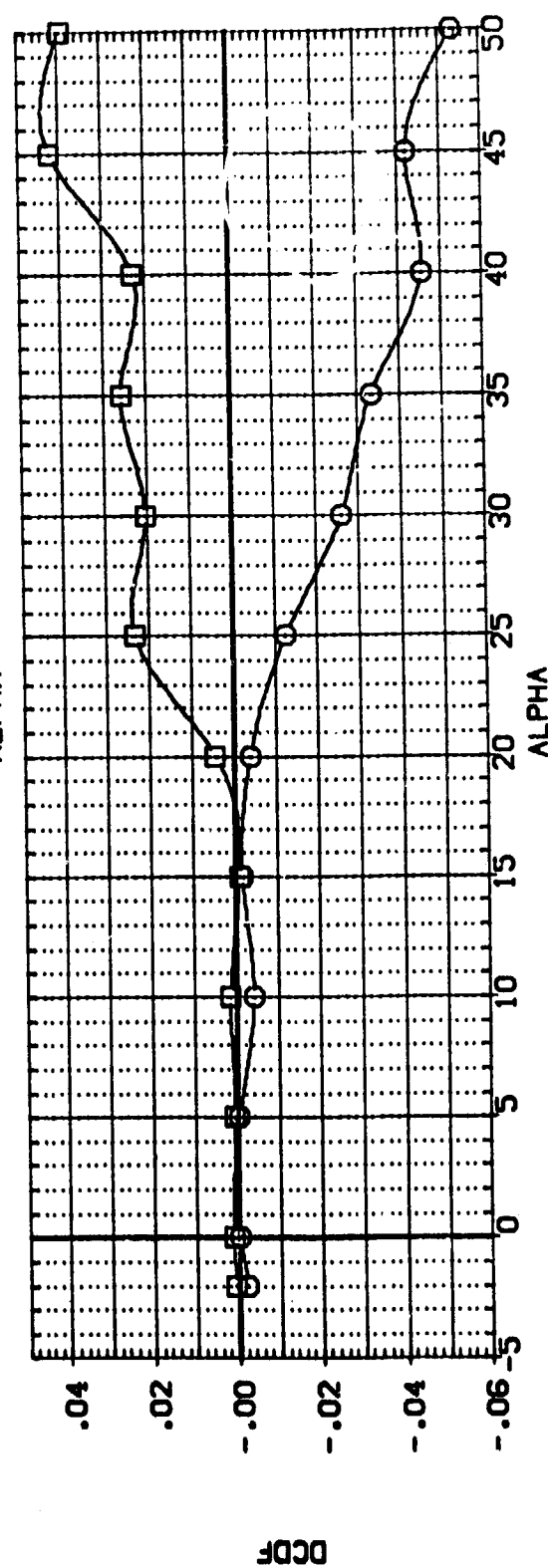
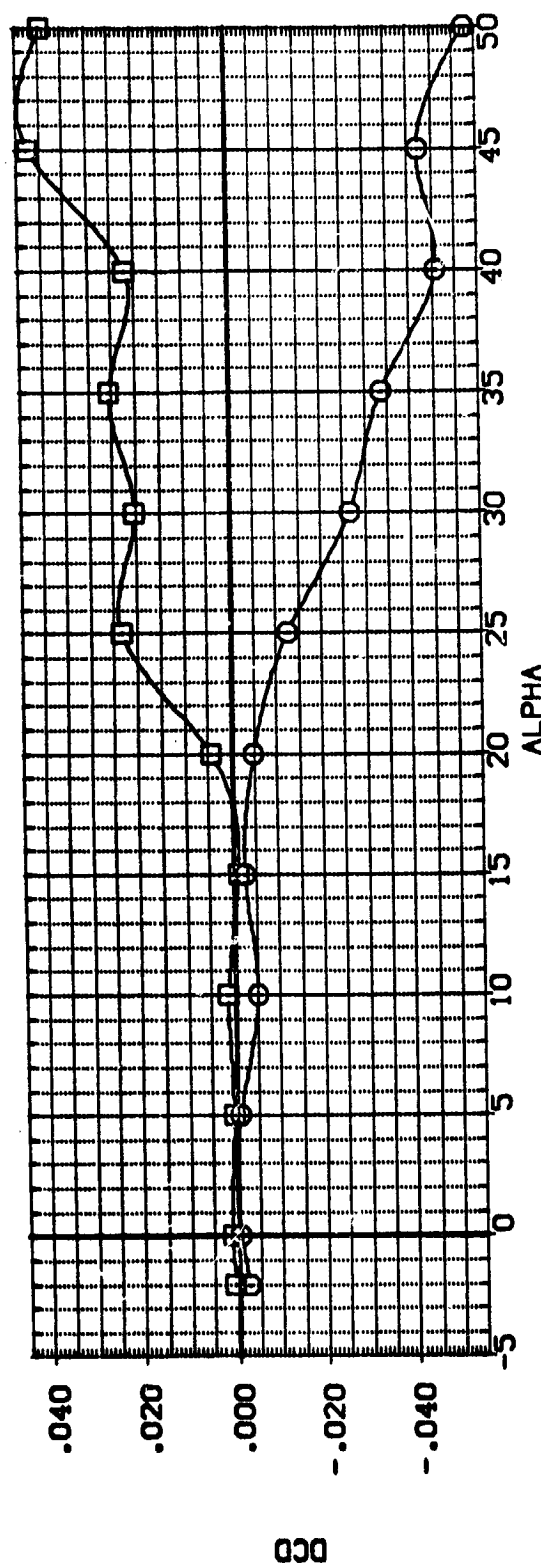


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

(A)MACH = 7.32

DATA SET SYMBOL: **Q** CONFIGURATION DESCRIPTION: **AVES 3.5-160 Q11B (B10F4C507G08)(V67E18)(V5R5)**
(FB007) **(FB013)**

DELDF: **-14.250**
 ELEVON: **.000**
 SPODBK: **54.920**
 RUDDER: **.000**

REFERENCE INFORMATION: **50.FT.**
 SREF: **2690.0000** IN.
 LREF: **474.8100** IN.
 BREF: **936.6800** IN.
 XMRP: **1076.4800** IN.
 YMRP: **.0000** IN.
 ZMRP: **400.0000** IN.
 SCALE: **.0150**

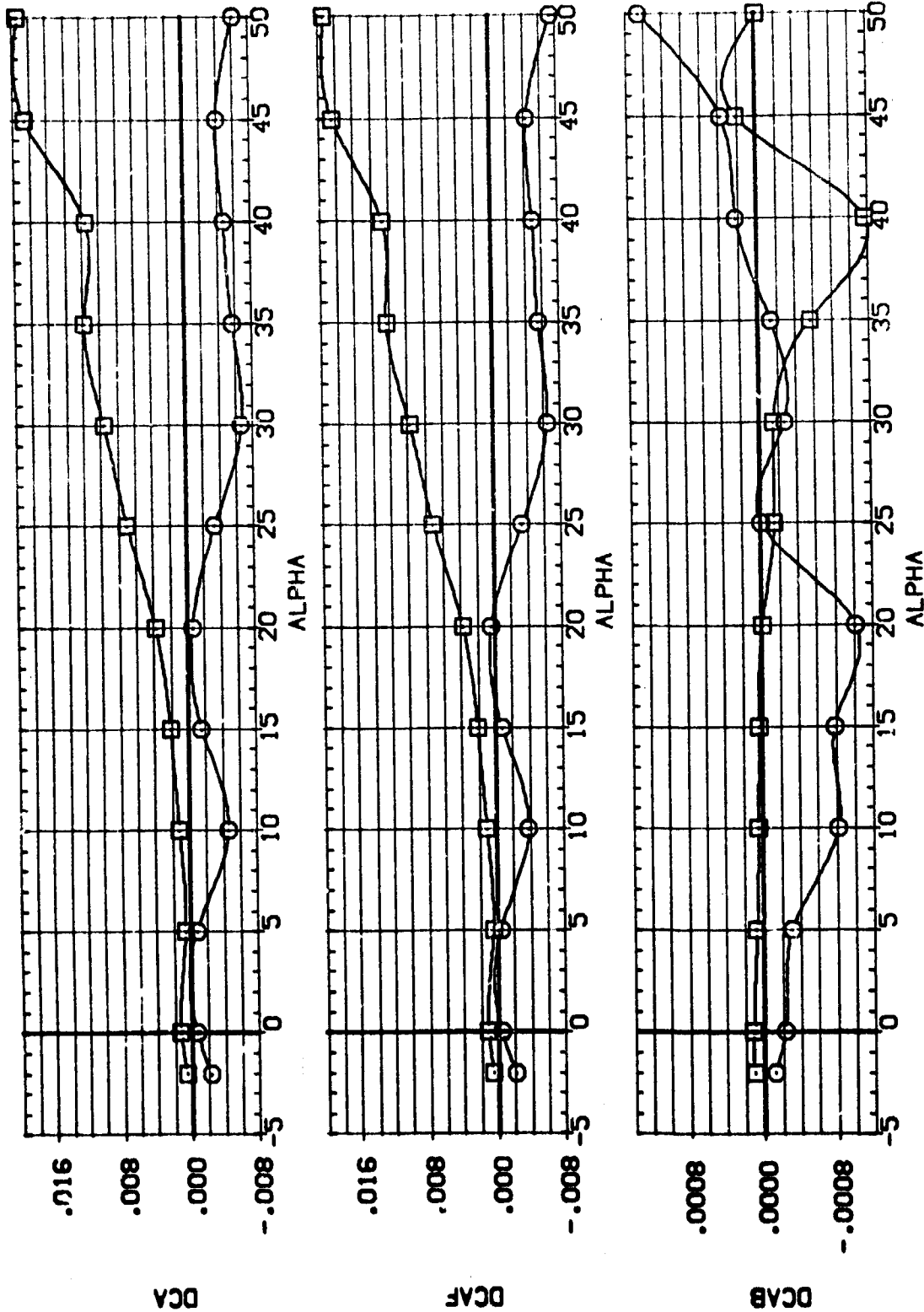


FIG. 4.0.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS
 (A) MACH = 7.32

DATA SET SYMBOL (FBK007) (FBK013)

CONFIGURATION DESCRIPTION
 AYES 3.5-160 CA118 (B10F4C5D7H3N8) (V87E18) (V55S)
 AYES 3.5-160 CA118 (B10F4C5D7H3N8) (V87E18) (V55S)

DELBOF ELEVON SPOBRK RUDDER
 -14.230 .000
 13.750 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

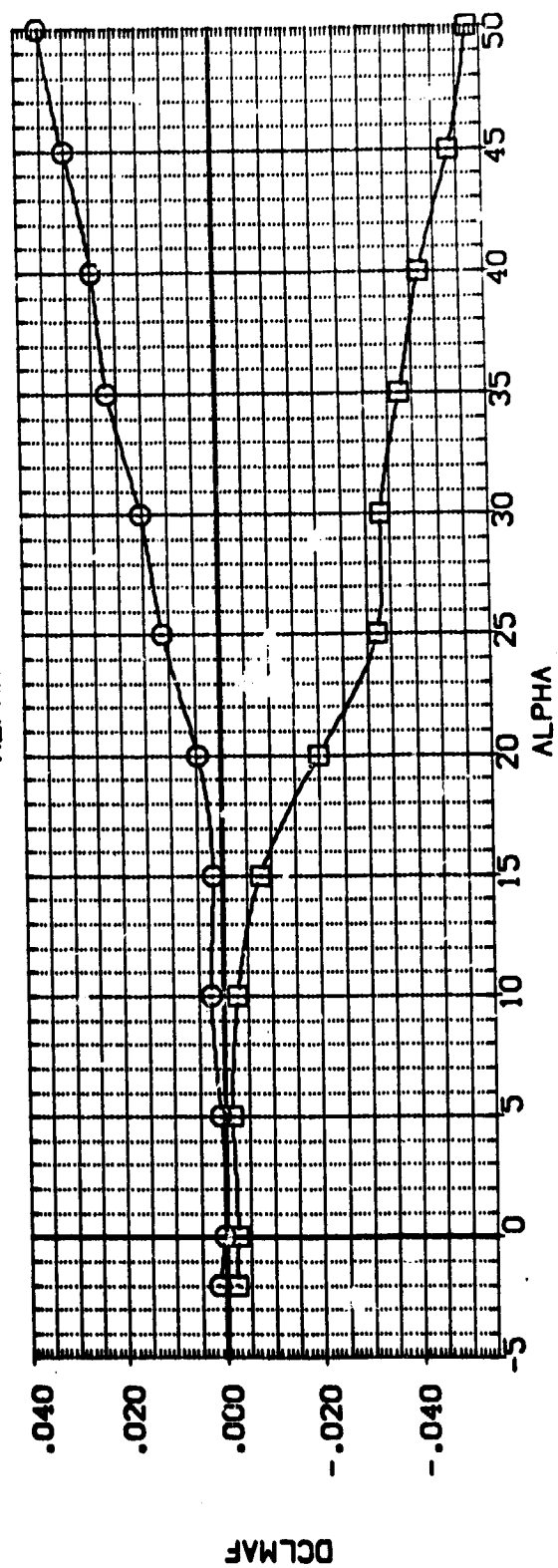
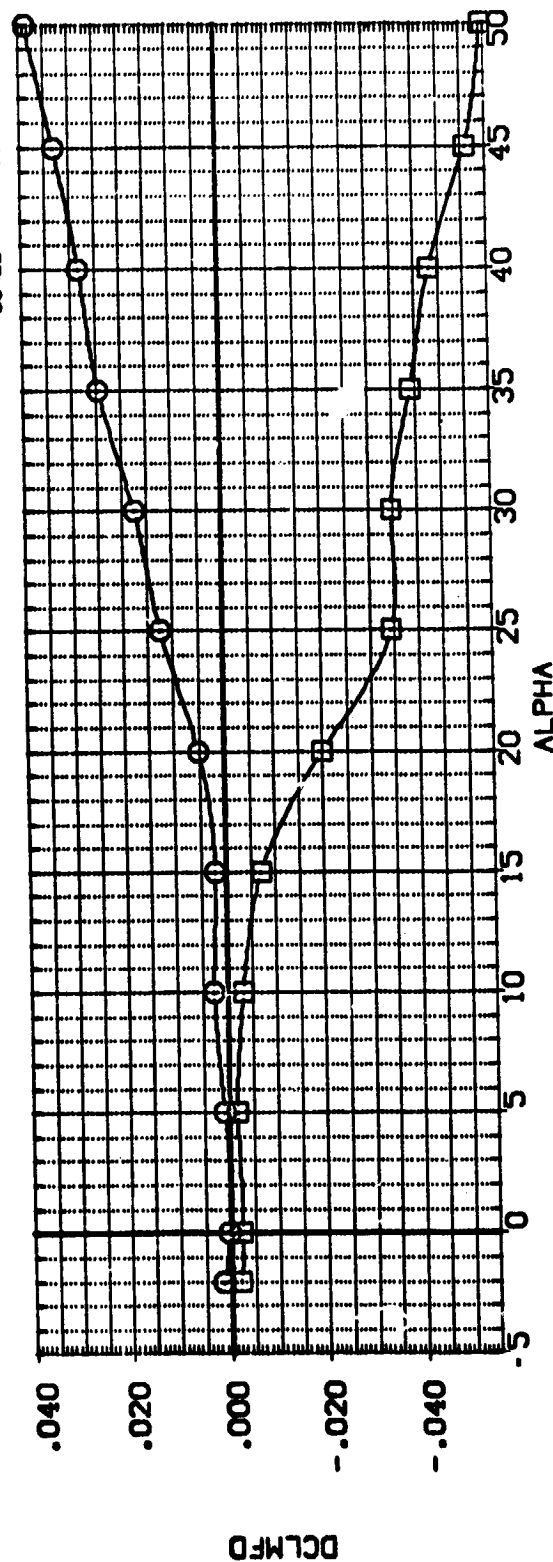
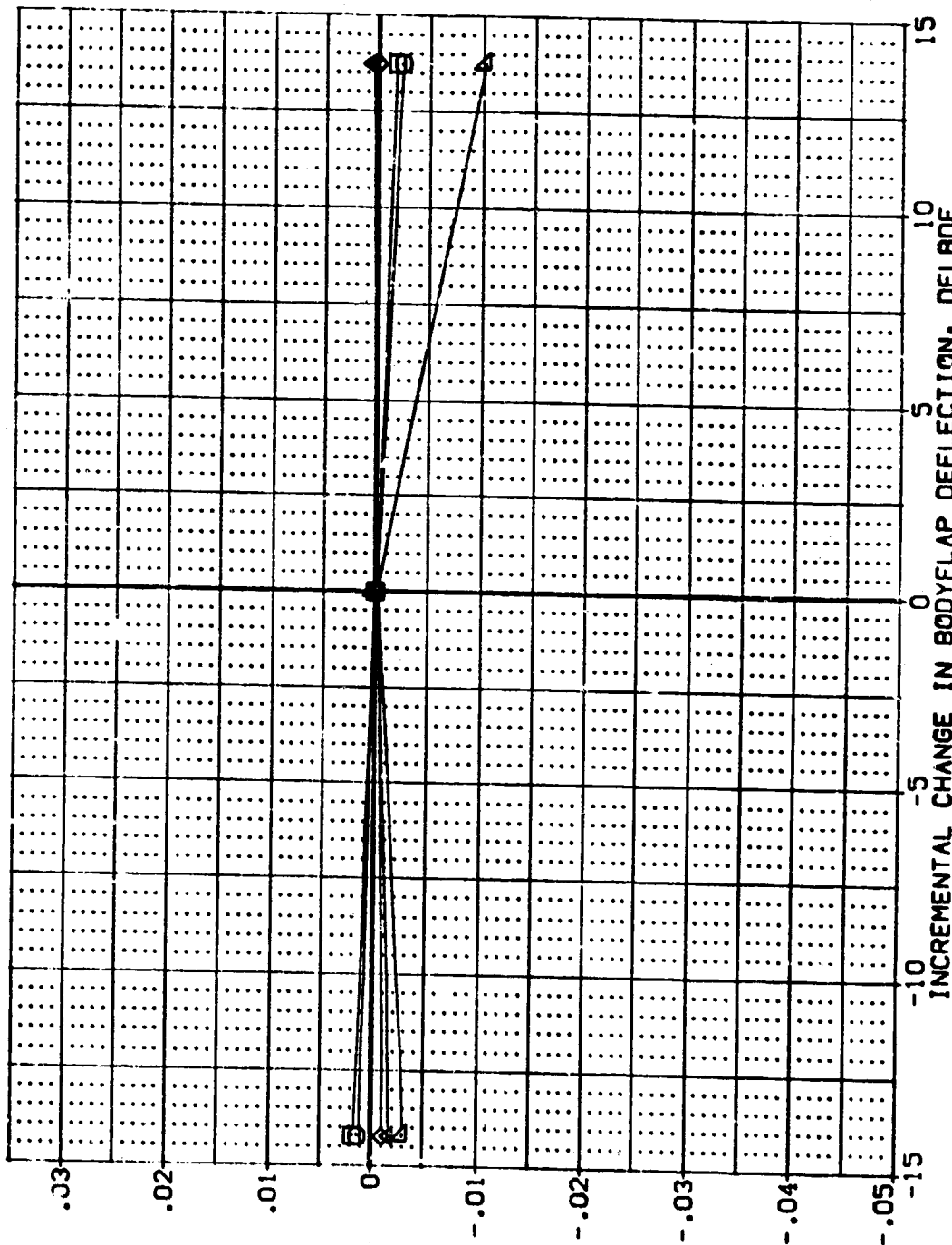


FIG. 4.0.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

(A) MACH = 7.32

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX807)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	MACH	DELBOF	DELBOF	SREF	SO.FT.
-2.000	7.320	.000	.000	2690.0000	IN.
.000	BETA	.000	.000	474.8100	IN.
5.000	ELVN-L	.000	.000	936.6800	IN.
10.000	ELVN-R	.000	.000	1076.4800	IN.
15.000	RUDDER	.000	.000	400.0000	IN.
	ELEVON	.000	.000	400.0000	IN.
				SCALE	.0150



INCREMENTAL CHANGE IN LIFT COEFFICIENT, DCL

FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX807)

SYMBOL
□

ALPHA
45.000
50.000

MACH
ELVN-L
RUDDER
ELEVON

PARAMETRIC VALUES
7.320 BETA
.000 ELVN-R
.000 SPOBRK
.000 ALLRON

DATA SOURCE
DELBOF
-14.250
13.750

DATA SET
FBX807
FBX013

DELBOF
.000
.000

REFERENCE INFORMATION
SQ.FT.
2090.0000
474.8100
936.6900
1076.1800
400.0000
400.0000
SCALE
.0150

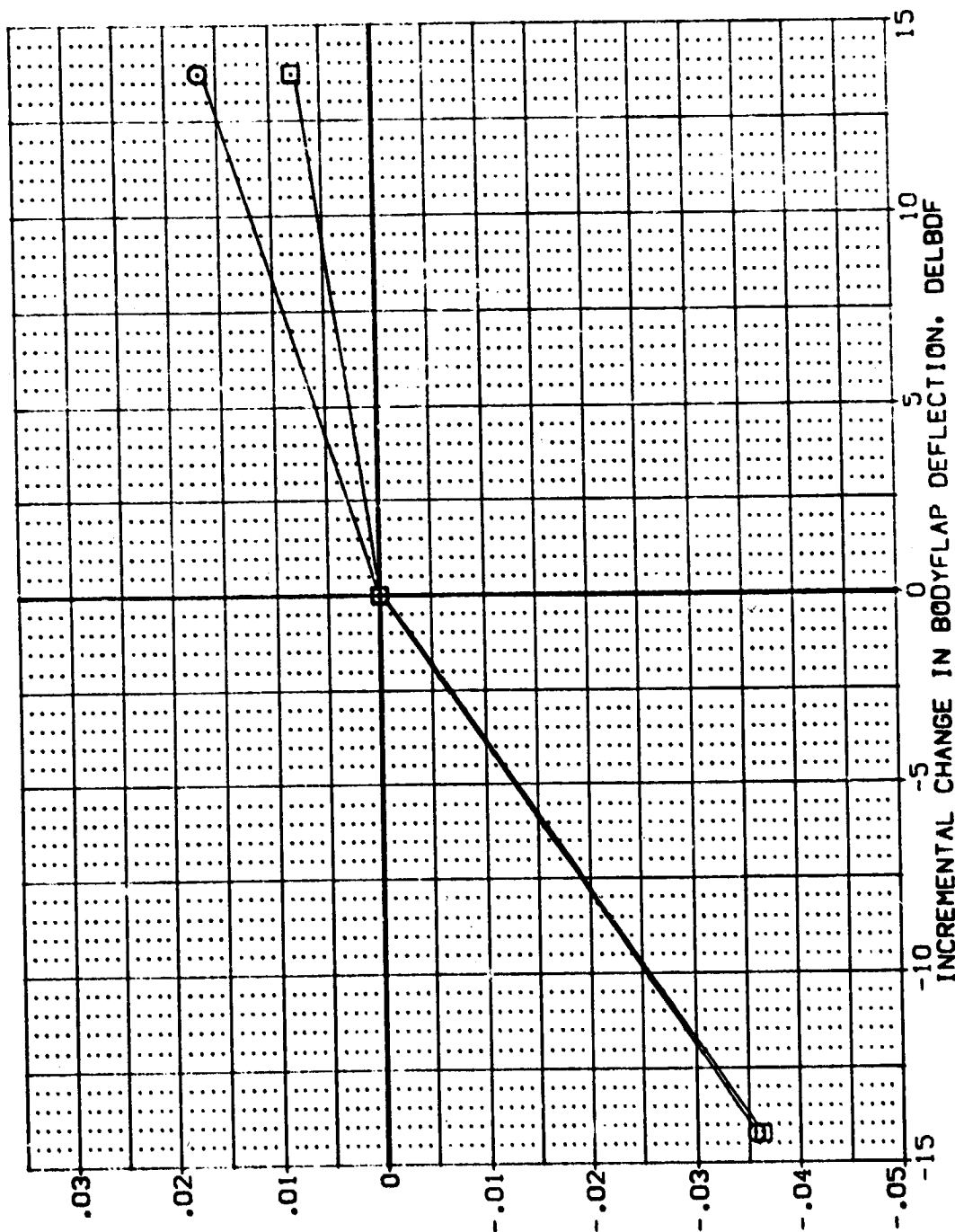


FIG. 4.0.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

2650.0000	SO. FT.
174.8100	IN.
936.6800	IN.
1076.4800	IN.
0.0000	IN.
400.0000	IN.
.0150	IN.

SYMBOL ☐ ☐ ☐ ☐ ☐

PARAMETRIC VALUES	
ALPHA	BETA
-2.000	7.320
.000	.000
5.000	.000
10.000	.000
15.000	
	MACH
	ELVN-L
	RUDDER
	ELEVON
	ELVN-R
	SPOBRK
	AILRON

PARAMETRIC VALUES	DATA SOURCE
BETA	.000
ELVN-R	.000
SPORX	.000
ALJRN	.000
	DELBOF
	-14.250
	13.750
	FBK007
	FBK013
	54.920
	.000

DELETED
0.000

SREF	2690.0000
LREF	474.8100
BREF	936.6800
XAPP	1076.4800
YAPP	.0000
ZAPP	400.0000
SCALE	.0150

INCREMENTAL CHANGE IN NORMAL FORCE COEFFICIENT, DCN

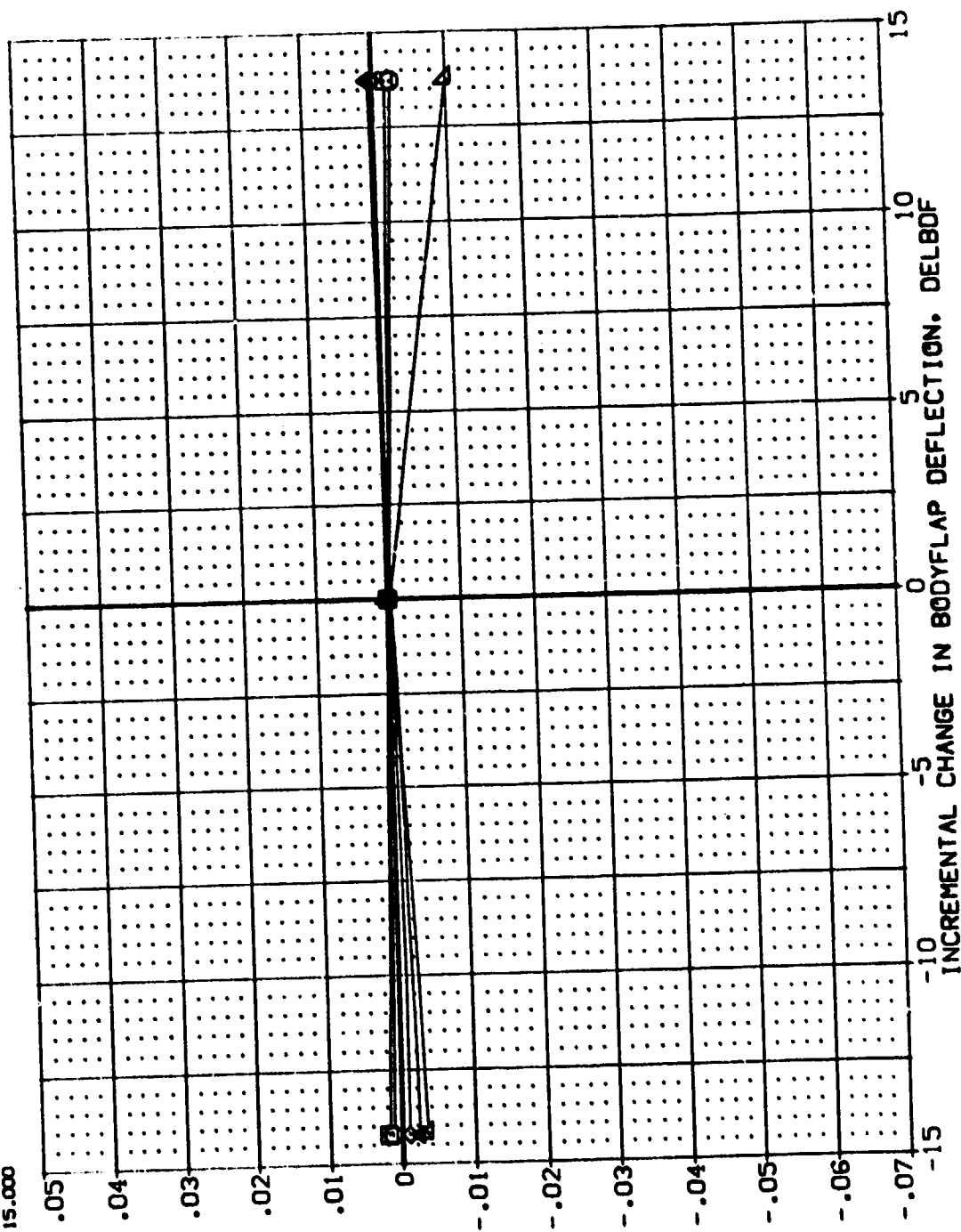


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

Symbol     

ALPHA
20,000
25,000
30,000
35,000
40,000

**HACH
ELVN-L
RUDDER
ELEVON**

PARAMETRIC VALUES	
BETA	7.320
ELVN-R	.000
SPOBRK	.000
AIRLON	.000

000	DATASET
000	FBXB07
920	FBXQ13
000	

DATA SOURCE
DELBOF
-14.250
13.750

DATA SET DELBOF
FBX014 .000

REFERENCE INFORMATION	
SREF	2690.0000
LREF	474.8100
SRF	936.6800
XMRP	1076.4800
YMRP	0.0000
ZMRP	400.0000
SCALE	.0150

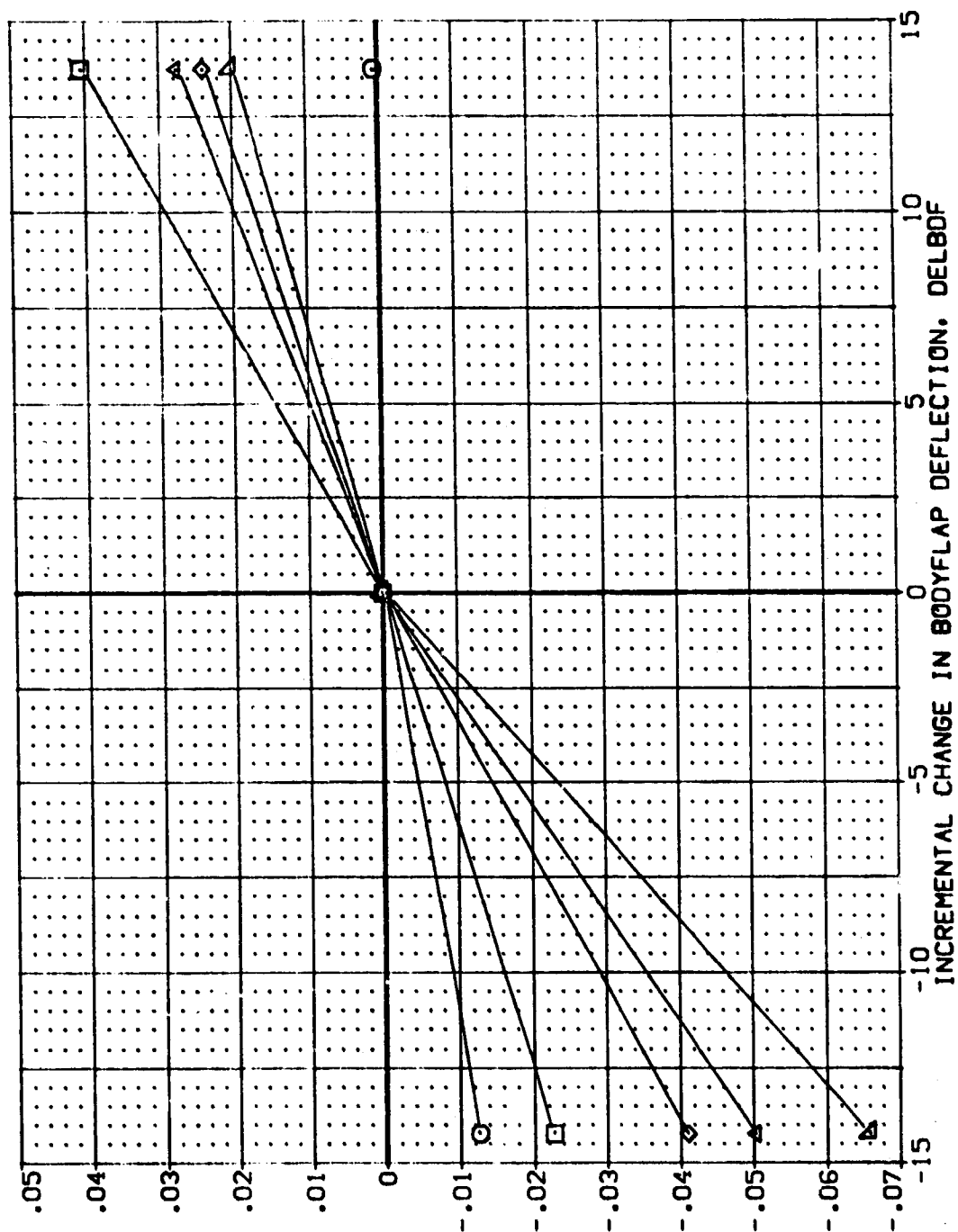


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (810F4C5D7M3N8)(W87E18)(V5R5)(FBXB07)

SYMBOL
○ □

ALPHA
45.000
50.000

MACH
CLVN-L
RUDDER
ELEVON

PARAMETRIC VALUES
7.320 BETA
.000 ELVN-R
.000 SPOBRK
.000 ATLDRN

DATA SOURCE
DELBOF
-14.250
54.920 FBXB07
FBXB07
FBXB07

DELBOF
.000
FBXB07
FBXB07

REFERENCE INFORMATION
SREF 2650.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XREF 1076.4800 IN.
YREF 400.0000 IN.
ZREF 400.0000 IN.
SCALE .0150

INCREMENTAL CHANGE IN NORMAL FORCE COEFFICIENT, DCN

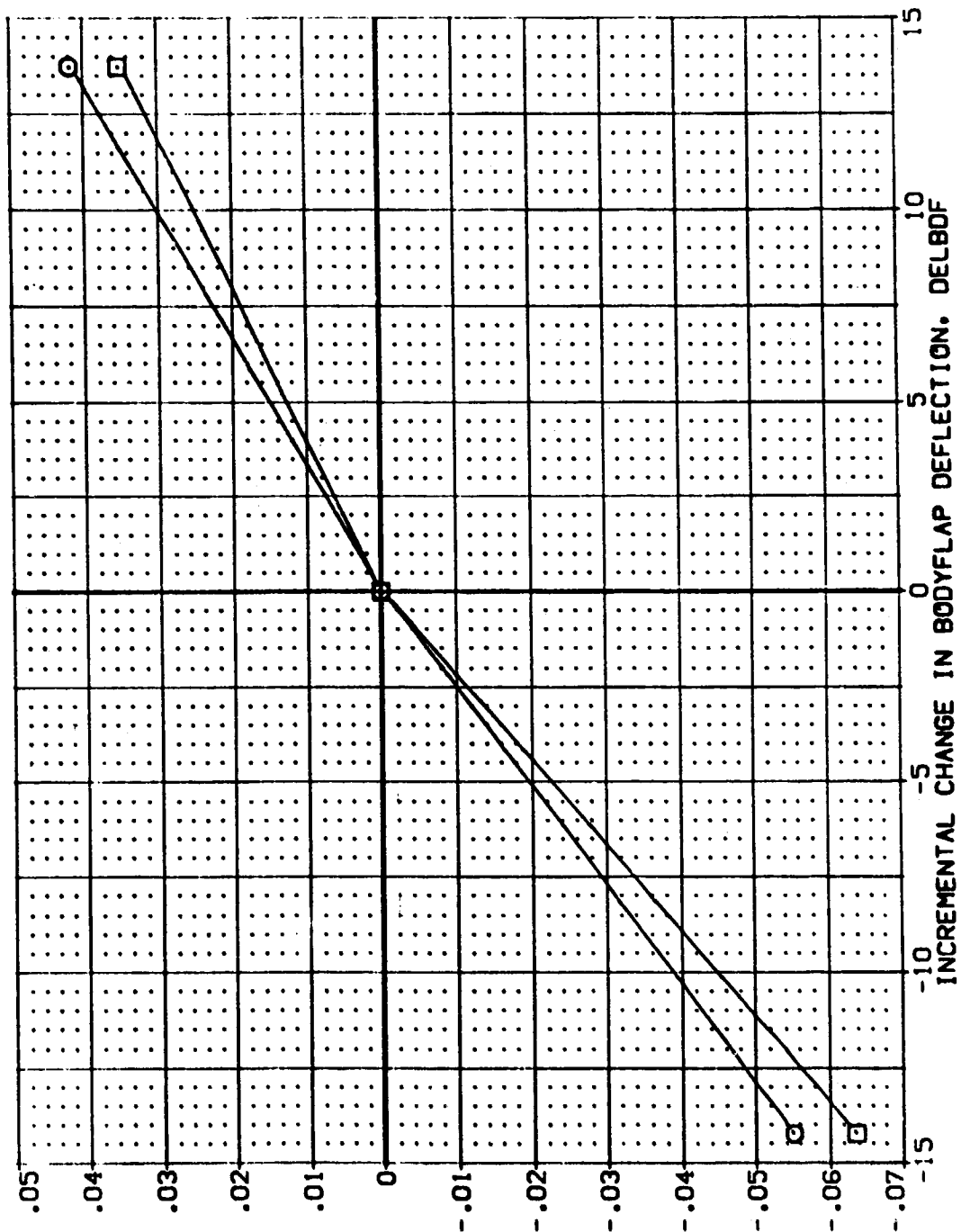


FIG. 4.0.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

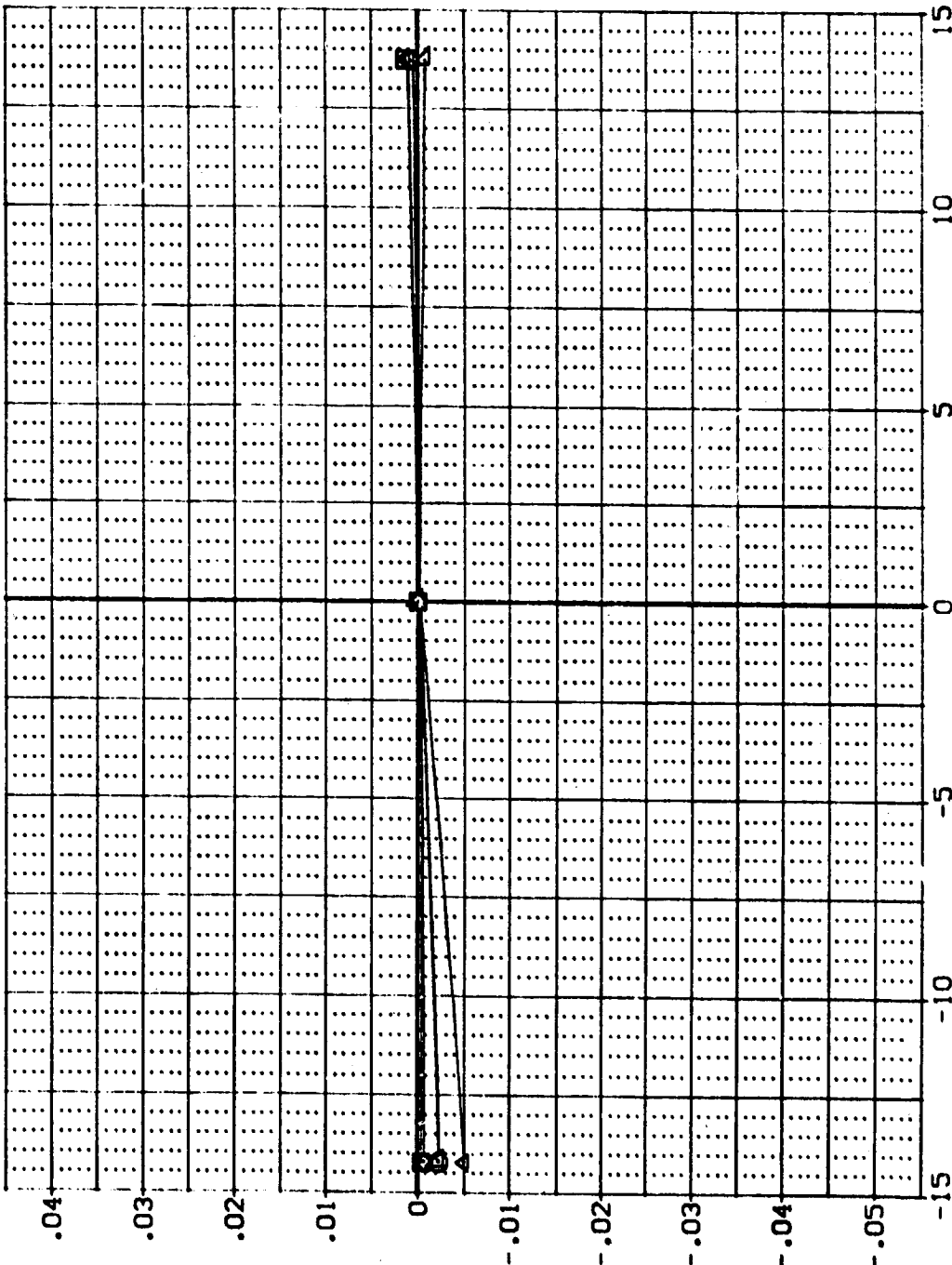
AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBX807)

SYMBOL
□ □ ◇ △ ▽

PARAMETRIC VALUES
ALPHA -2.000 MACH 7.320 BETA .000
ELVN-L .000 ELVN-R .000
RUDDER .000 SPDRK .000
ELEVON .000 ALLRON .000

DATA SOURCE
DELBOF -14.250
FBX013 13.750
FBX014 .000
FBX013 54.920
FBX014 .000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 938.5800 IN.
YREF 1076.4800 IN.
ZREF .0000 IN.
SCALE 400.0000
SCALE .0150



INCREMENTAL CHANGE IN DRAG COEFFICIENT, DCD

INCREMENTAL CHANGE IN BODYFLAP DEFLECTION, DELBOF

FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 07.118 (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX807)

SYMBOL
 ○ □ ◇ △ ▽

ALPHA
 20.000
 25.000
 30.000
 35.000
 40.000

MACH
 7.320
 ELVN-L
 ELVN-R
 RUDDER
 ELEVON

PARAMETRIC VALUES
 BETA
 ELVN-R
 SPOBRK
 ALLRON

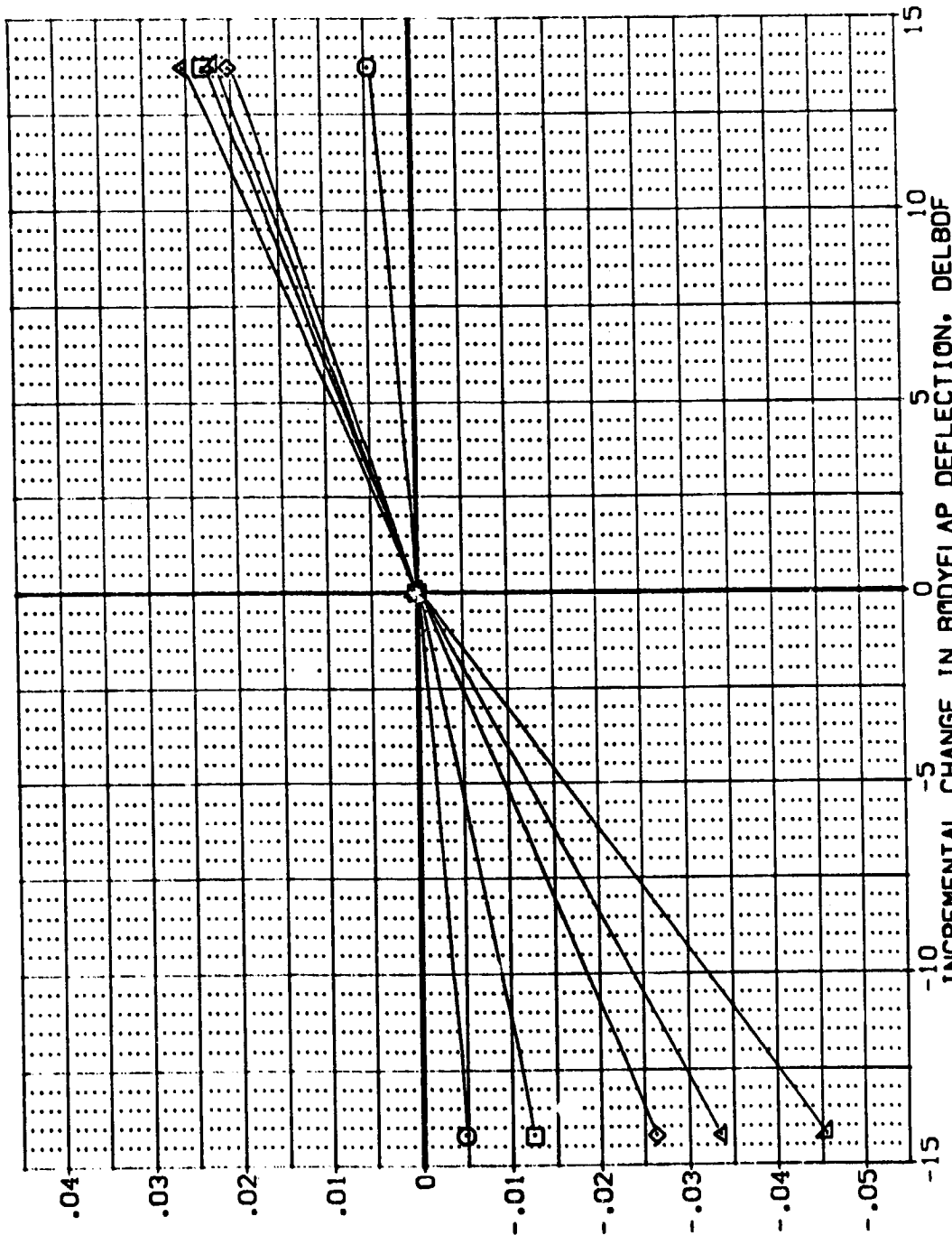
DATA SOURCE
 DELBOF
 -14.250
 13.750

DATASET
 FBX807
 FBX013

REFERENCE INFORMATION
 SREF
 LREF
 BREF
 XMRP
 YMRP
 ZMRP
 SCALE

2690.0000
 474.8100
 936.6800
 1076.4800
 .0000
 .0000
 .0150

SO.FT.
 IN.
 IN.
 IN.
 IN.
 IN.



INCREMENTAL CHANGE IN DRAG COEFFICIENT, CDD

INCREMENTAL CHANGE IN BODYFLAP DEFLECTION, DELBOF

FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

Symbol

ALPHA
45.000
50.000

**HACH
ELVN-L
RUDDER
ELEVON**

PARAMETRIC VALUES	BETA	ELVN-R	SPOBPK	ALLRGN
7.320	.000	.000	.000	

\$4,920

DATA SOURCE
DELBOF
-14.250
13.750

DATASET DELBDF
 FBX014 .000

REFERENCE INFORMATION	
	SQ.FT.
2690.0000	IN.
474.8100	IN.
936.6800	IN.
1076.4800	IN.
.0000	IN.
400.0000	IN.
.0150	

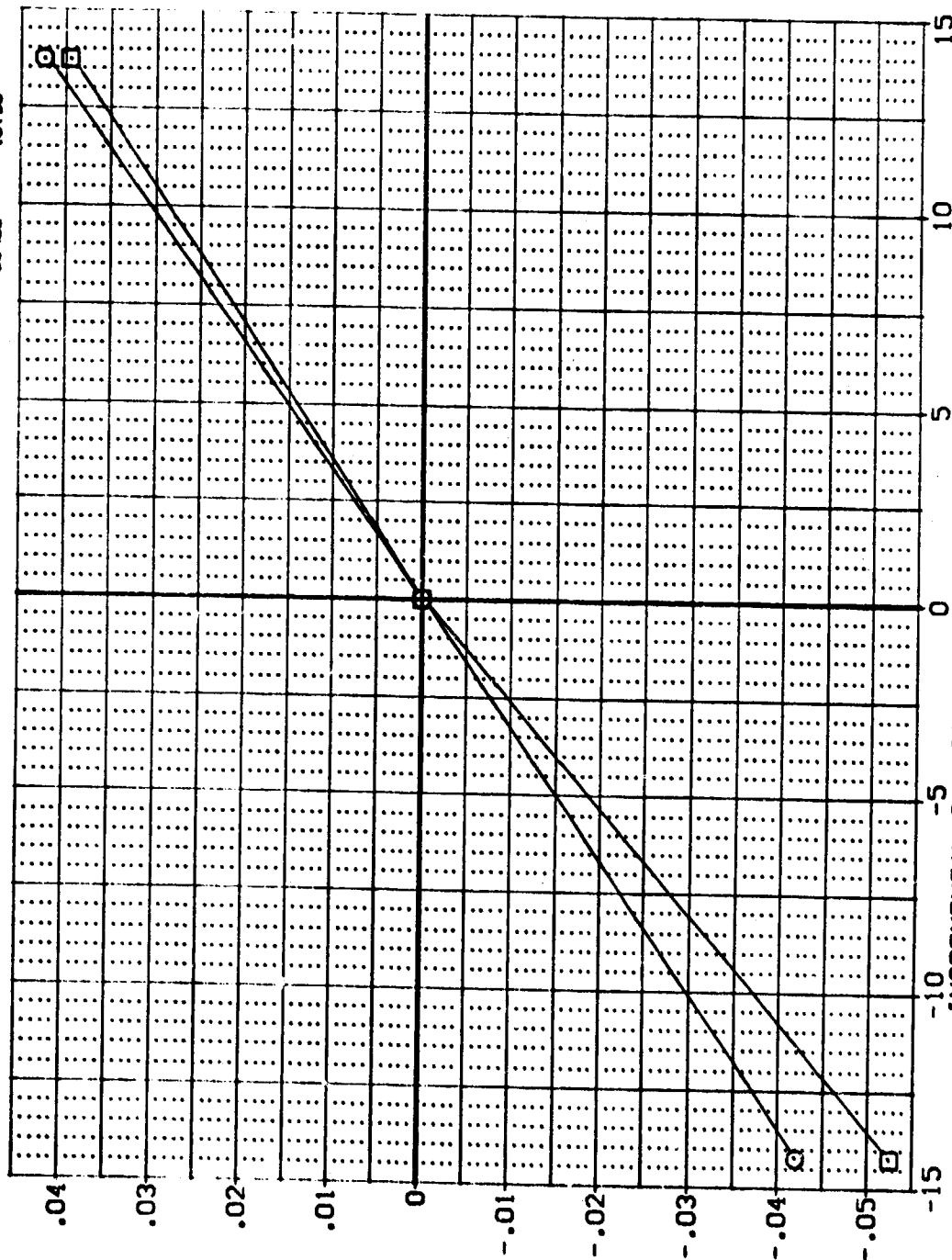


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODY-FLAP EFFECTS

REFERENCE INFORMATION	50 FT.
2690.0000	IN.
474.8100	IN.
936.6800	IN.
1076.4800	IN.
.0000	IN.
400.0000	IN.
.0150	

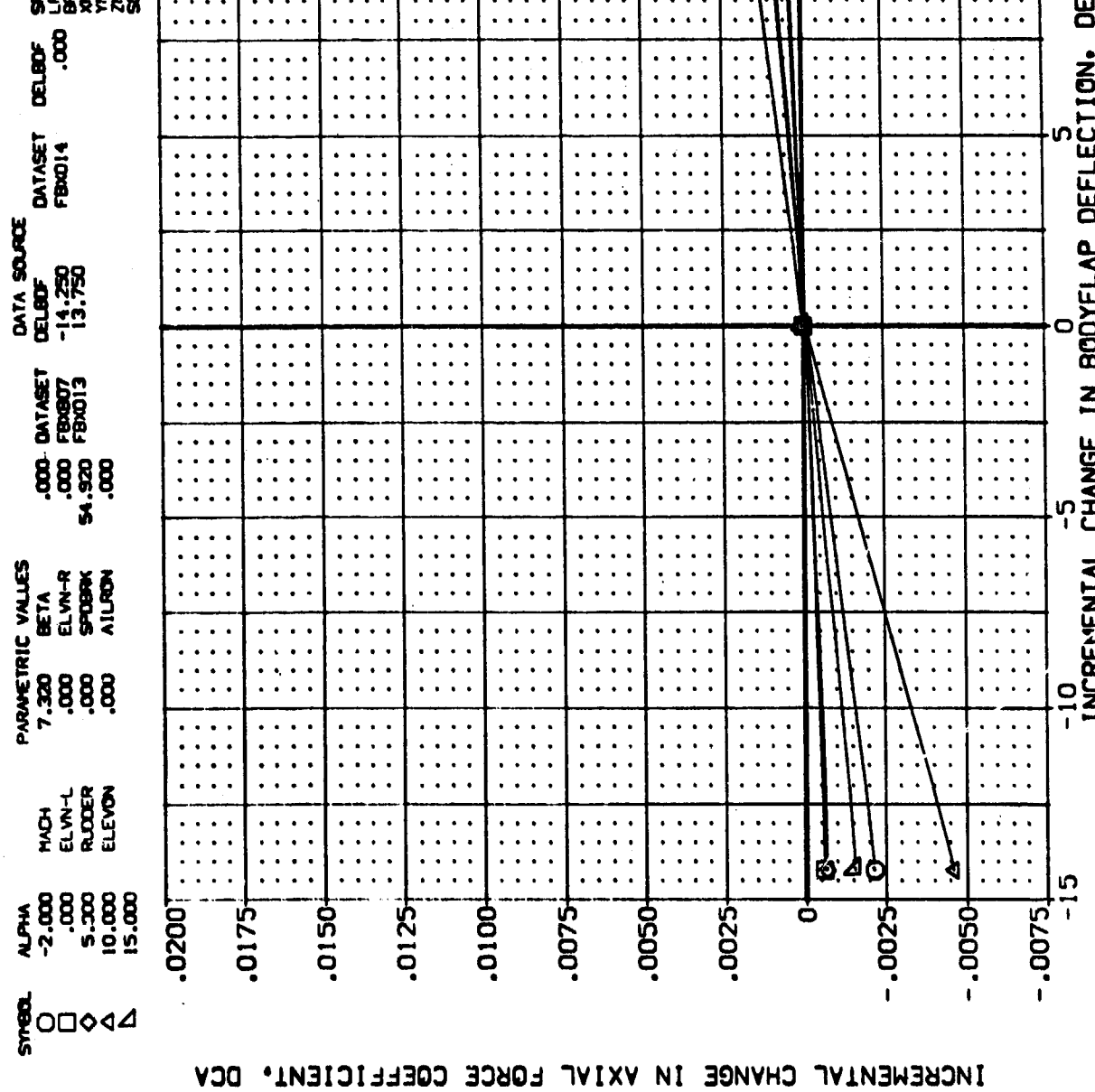


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (810F4C507M3N8)(W87E18)(V5R5)(FBX807)

SYMBOL		PARAMETRIC VALUES				DATA SOURCE		REFERENCE INFORMATION	
○	ALPHA	20.000	MACH	7.320	BETA	.000	DELBOF	SREF	2690.0000
□	ELVN-L	25.000	ELVN-R	.000	ELVN-R	.000	DELBOF	LREF	474.8100
◇	RUDER	30.000	SPOBRK	.000	SPOBRK	54.920	DELBOF	BREF	936.6800
△	ELEVON	35.000	A1LRON	.000	A1LRON	.000	DELBOF	XREF	1073.1800
▽		40.000				.000	DELBOF	YREF	400.0000
							DELBOF	ZREF	400.0000
							DELBOF	SCALE	.0150

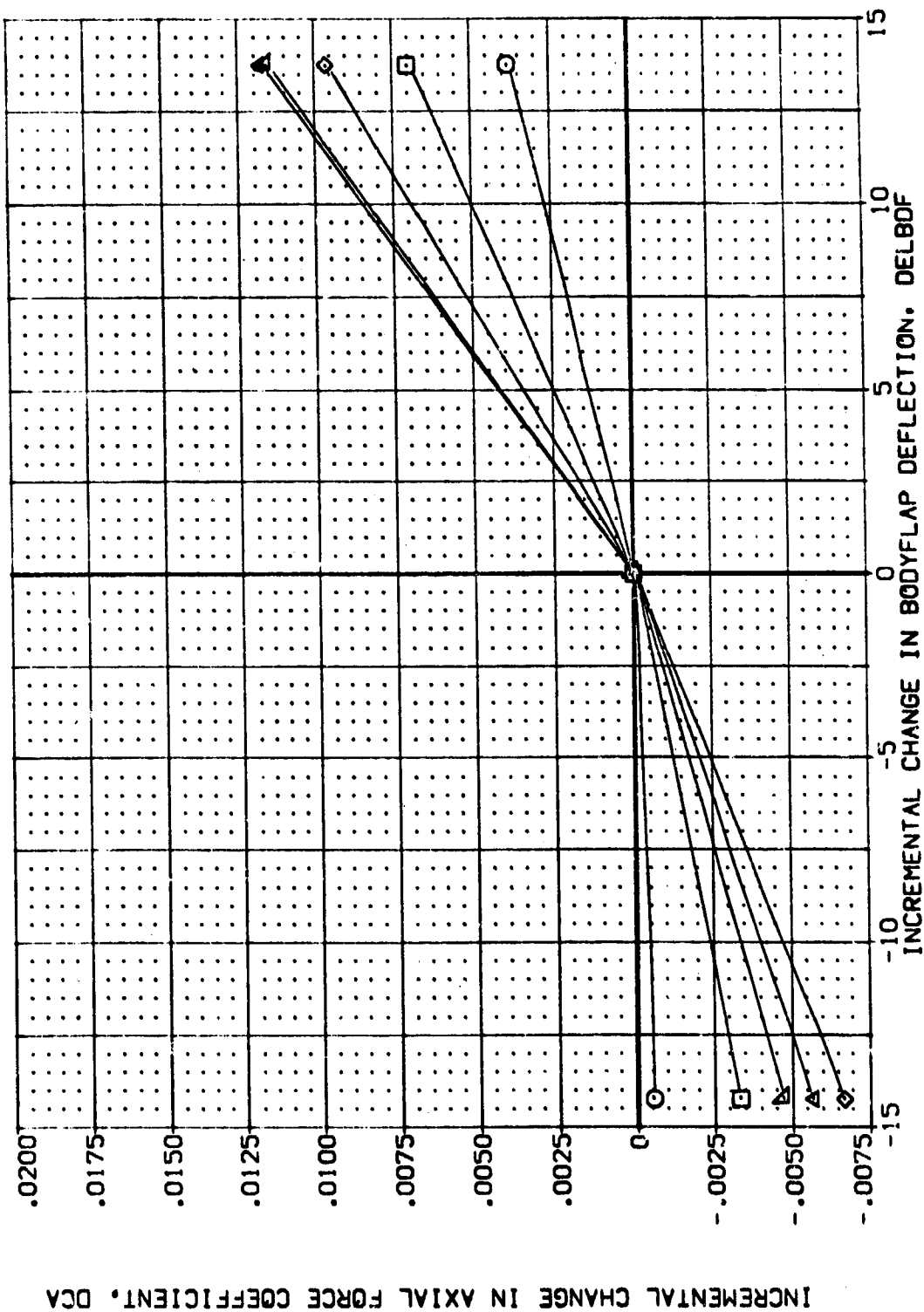


FIG. 4.0.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

REFERENCE INFORMATION	
2690.0000	50. FT.
474.8100	IN.
936.6800	IN.
1076.4800	IN.
0000.0000	IN.
400.0000	IN.
.0150	

SYMBOL	ALPHA
<input type="radio"/>	45.000
<input type="checkbox"/>	50.000

PARAMETRIC VALUES	
MACH	BETA
ELVN-L	ELVN-R
RLOOR	SPOBRK
ELEVN	AILRON

	DATASET	DELETED	DATA SOURCE
.000			
.000	FBI007	-14.250	
.920	FBI013	-13.750	
.000			

DATASET DELETED
FB0014 .000

GREF	2690.0000
LREF	474.8100
BREF	936.6800
XPRP	1076.4800
YPRP	.0000
ZPRP	400.0000
SCALE	.0150

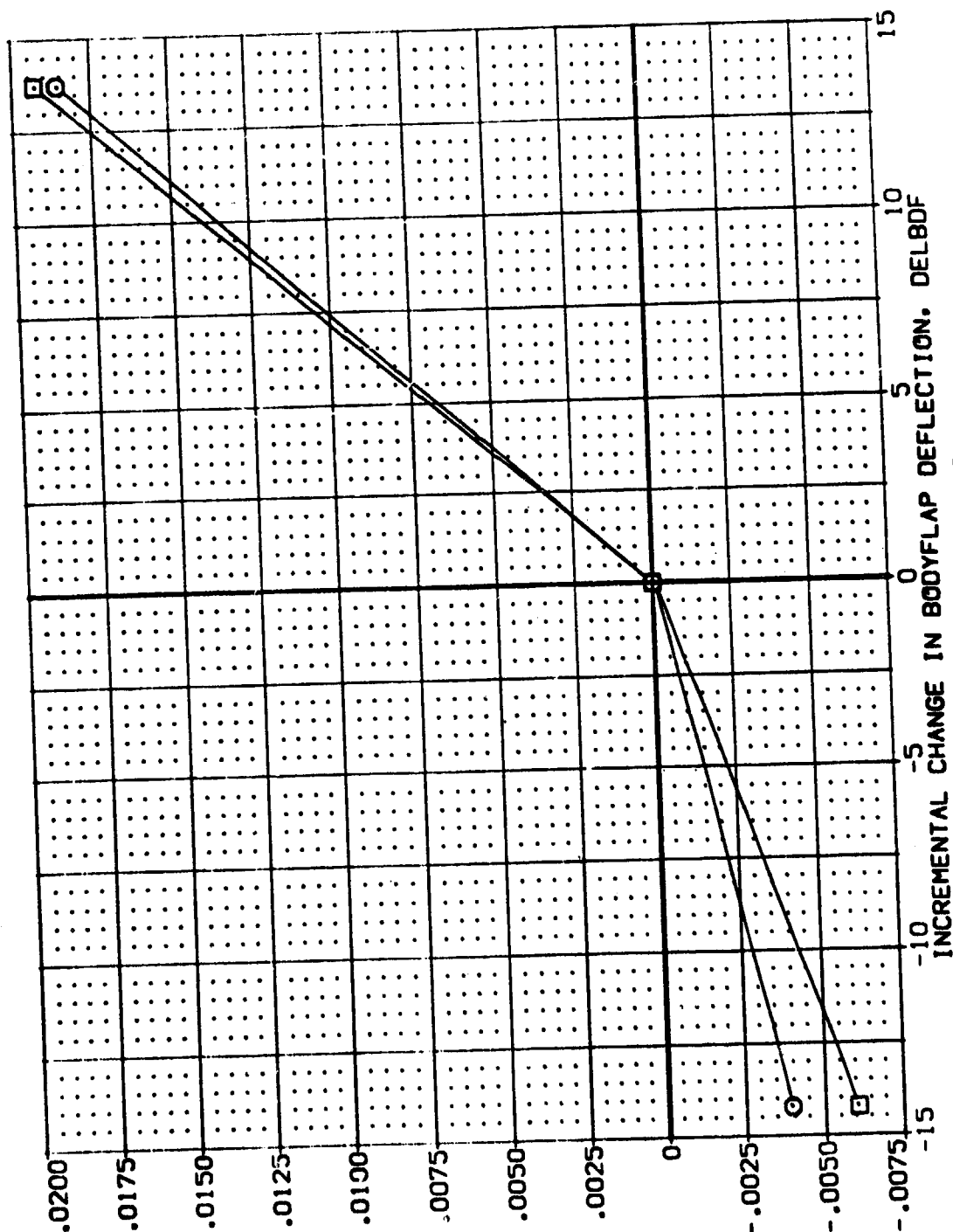



FIG. 4.0.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

Symbol 

ALPHA
-2.000
.000
5.000
10.000
15.000

MACH
 ELVN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
BETA
7.320
ELVN-R
.000
SPDRK
.000
AIRON
.000

BETA
ELVN-R
SPDRK
MILRON

.000	DATASET
.000	FBX907
54.920	FBX013
.000	

DATASET
FBXB07
FBX013

DELBA
-14.250
13.750

057
250

FBX014 .000

SCAL
ZMRP
YMRP
XMRP
BREF
LREF

936.6800
1076.4800
400.0000
.0150

REFERENCE INFORMATION		SG.FT.
2690.0000		IN.
474.8100		IN.
936.6800		IN.
1076.4800		IN.
0.0000		IN.

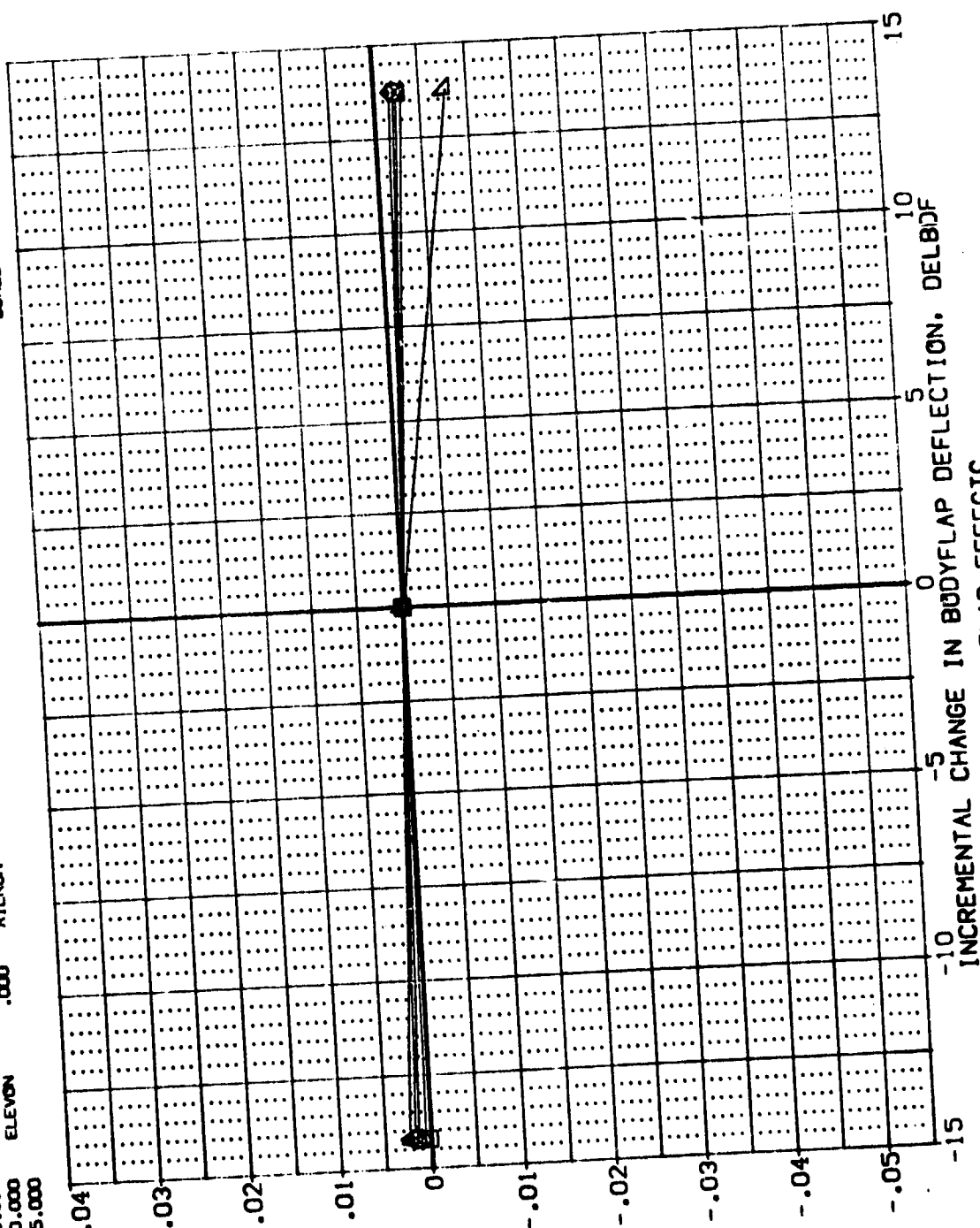


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

Symbol ☐ ☐

ALPHA	MACH
45.000	ELVN-L
50.000	RUDDER
	ELEVON

PARAMETRIC VALUES	
7.320	BETA
.000	ELVN-R
.000	SPOBRK
.000	AIRLON

\$4,920.000

DATA SOURCE
DELBOF
-14.250
13.750

DATA SET DELBDF
FBXQ14 .J00

3387
3388
3389

REFERENCE INFORMATION	SQ. FT.
7690.0000	IN.
474.8100	IN.
936.6800	IN.
1076.4800	IN.
.0000	IN.
400.0000	IN.
.0150	IN.

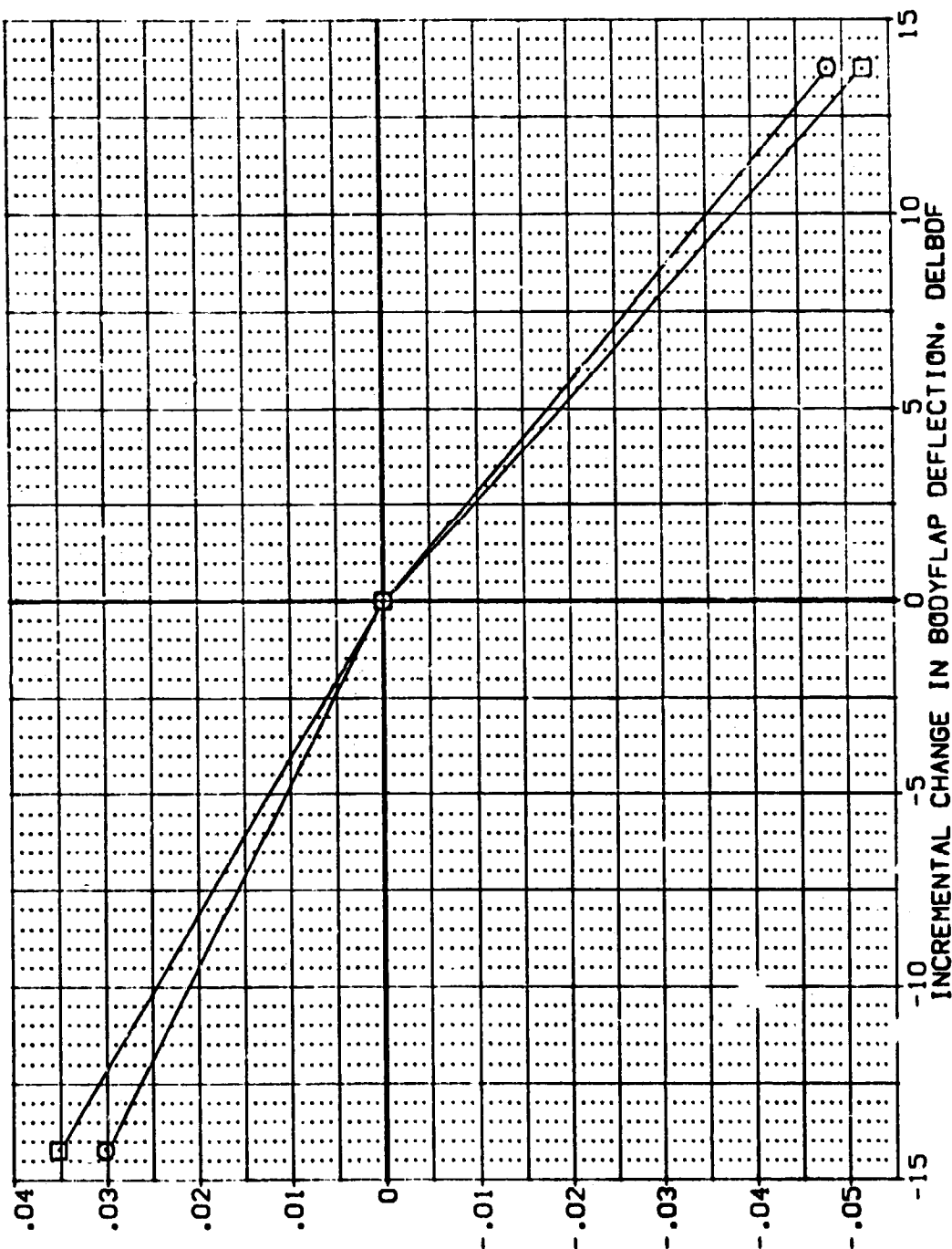


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX807)

PARAMETRIC VALUES			DATA SOURCE			REFERENCE INFORMATION		
ALPHA	MACH	BETA	.000	FBX807	DELBOF	SREF	2650.0000	SQ.FT.
-2.000	7.320	.000	.000	FBX807	.000	LREF	474.8100	IN.
.000	ELVN-L	.000	54.920	FBX013		BREF	936.6900	IN.
5.000	RUDER	.000				YREF	1076.4800	IN.
10.000	ELEVON	.000				ZREF	400.0000	IN.
15.000						SCALE	.0150	

SYMBOL
 ▽◇□◇▽

INCREMENTAL CHANGE IN FORWARD PITCHING MOMENT COEFFICIENT, DCLMFD

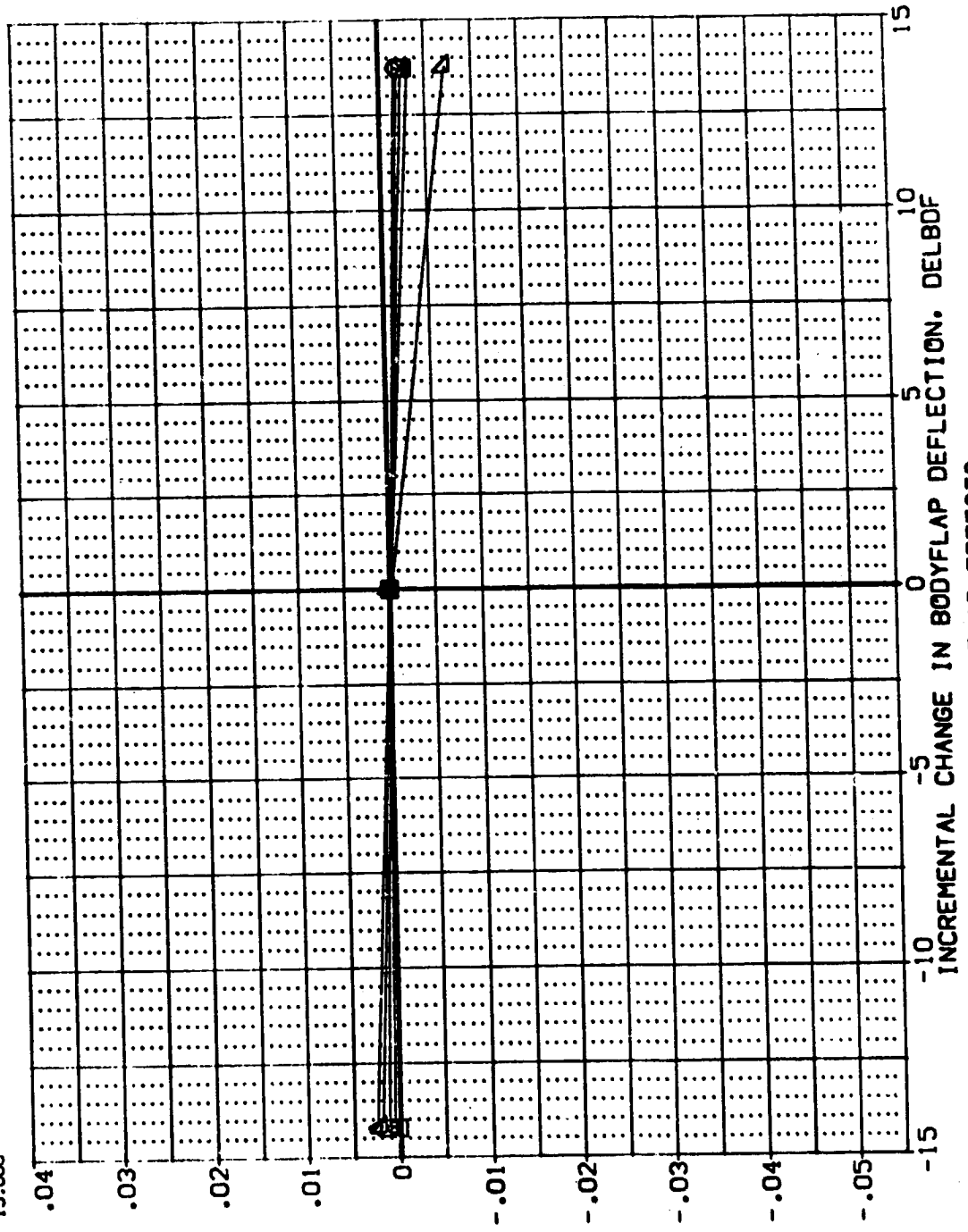


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (810F4C507M3N8)(W87E18)(V5R5)(FBX807)

REFERENCE INFORMATION
 SREF 2680.0000
 LREF 474.8100
 BREF 936.6600
 XPRP 1076.4800
 YPRP .0000
 ZPRP 400.0000
 SCALE .0150

DATA SOURCE
 DELBOF -14.250
 FBX014 13.750

PARAMETRIC VALUES
 BETA .000
 ELVN-R .000
 SPOBRK .000
 AILRON .000

ALPHA
 20.000
 25.000
 30.000
 35.000
 40.000

SYMBOL
 ▽ ◆ □ □

INCREMENTAL CHANGE IN FORWARD PITCHING MOMENT COEFFICIENT, DCLMFD

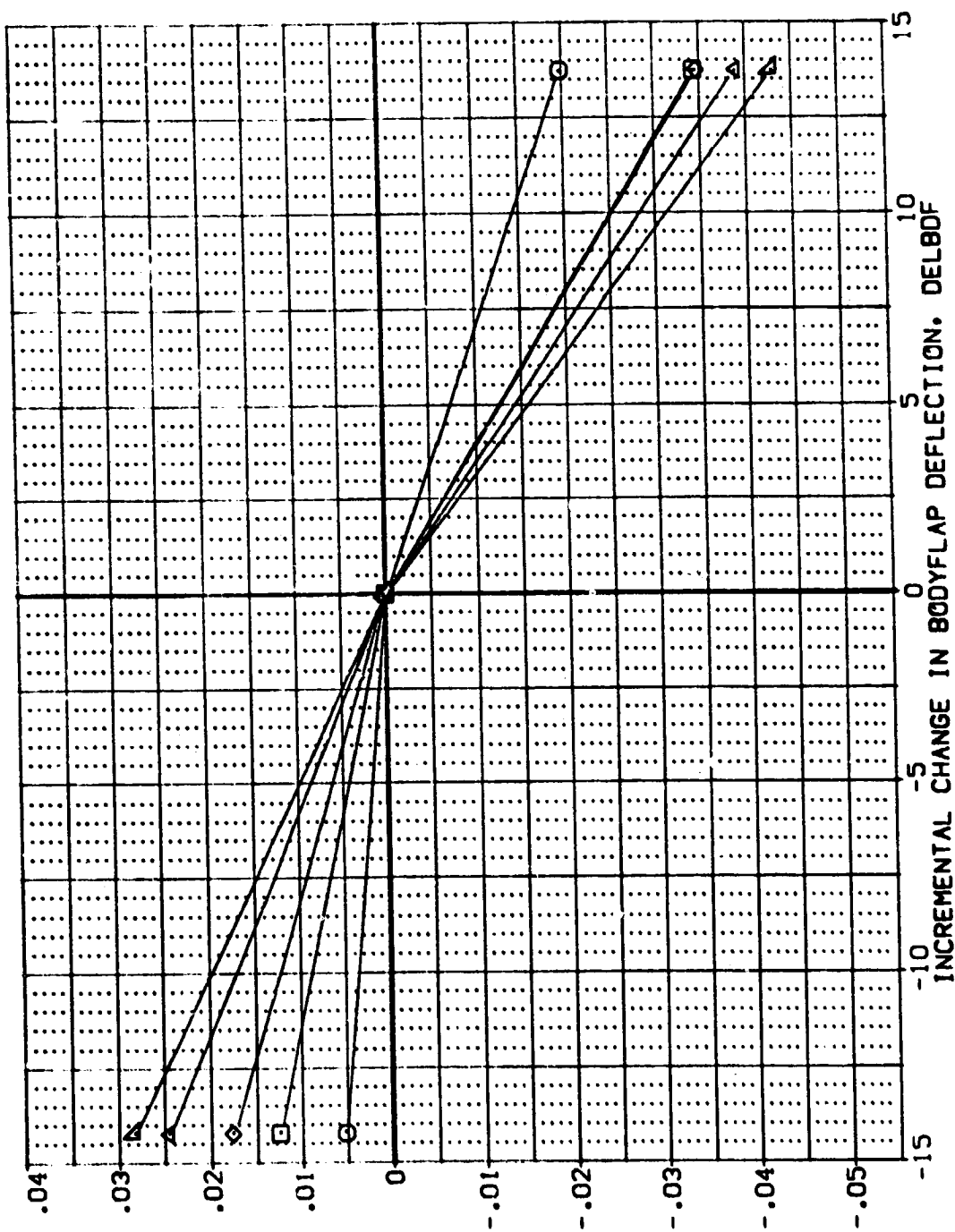


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (810F4C507M3N8)(W87E18)(V5R5)(FBX807)

REFERENCE INFORMATION
 SREF 2690.0000 50.FT.
 UREF 474.8100 IN.
 BREF 938.6800 IN.
 YMRP 1076.4800 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

DATA SOURCE
 DELBDF FBX014
 DELBDF -14.250
 FBX013 13.750

PAPAMETRIC VALUES
 BETA 7.320
 ELVN-L .000
 ELVN-R .000
 SPDRK 54.820
 AILNEN .000

SYMBOL
☐ ☐

INCREMENTAL CHANGE IN FORWARD PITCHING MOMENT COEFFICIENT, DCLMPD

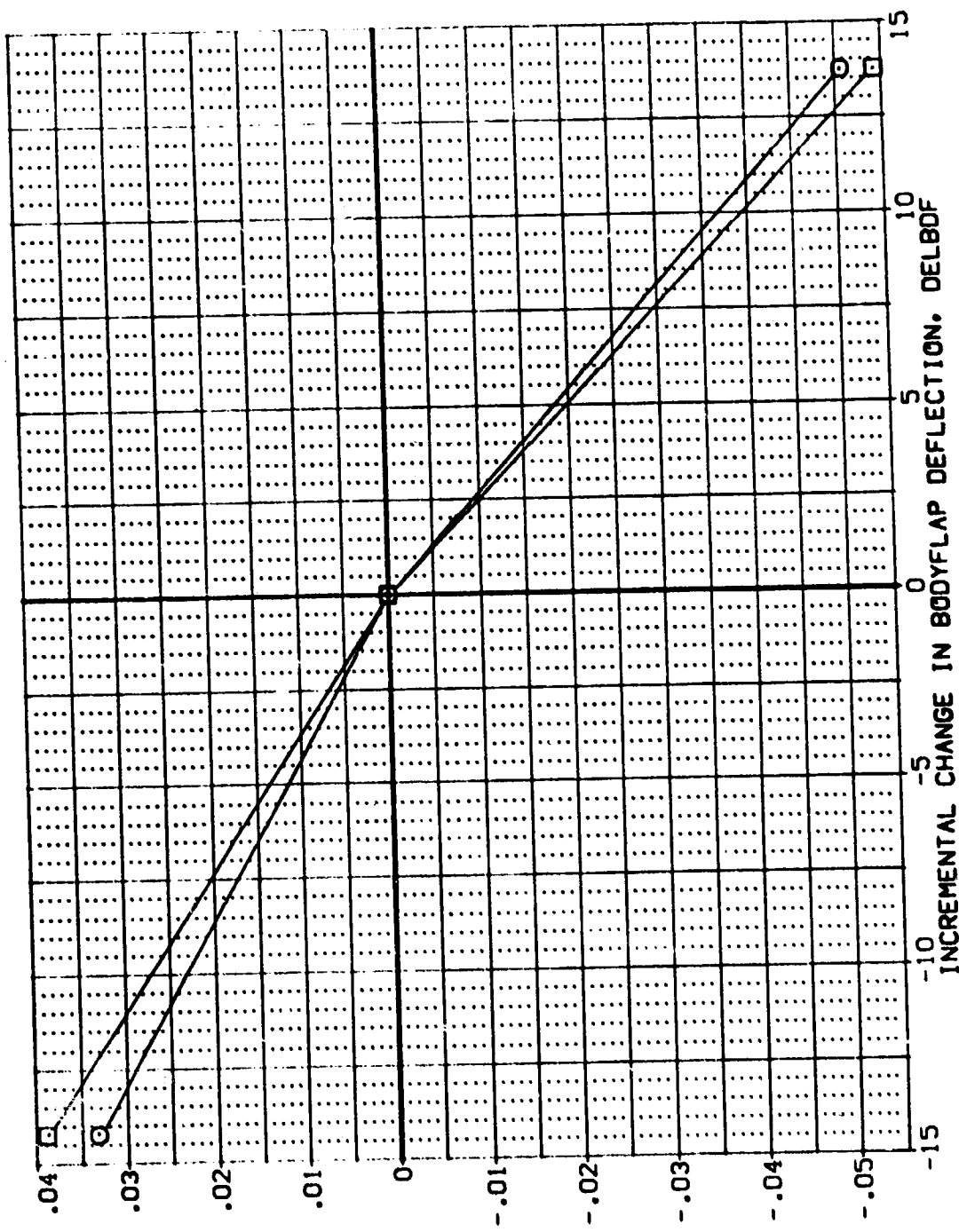


FIG. 4.D.2 MACH 7.32 INCREMENTAL BODYFLAP EFFECTS

DATA SET SYMBOL: (FBK036) (FBK038)
 CONFIGURATION DESCRIPTION:
 ARES 3.5-160 0A118 (B10F4C507K38)(V87E18)(VS95)
 ARES 3.5-160 0A118 (B10F4C507K38)(V87E18)(VS95)

DELBOF: -14.250 13.750
 ELEVON: .000 54.920
 SPDBRK: .000 54.920
 RUDDER: .000 .000

REFERENCE INFORMATION:
 SREF: 2650.0000 J.F.T.
 LREF: 474.8100
 BREF: 935.6800
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

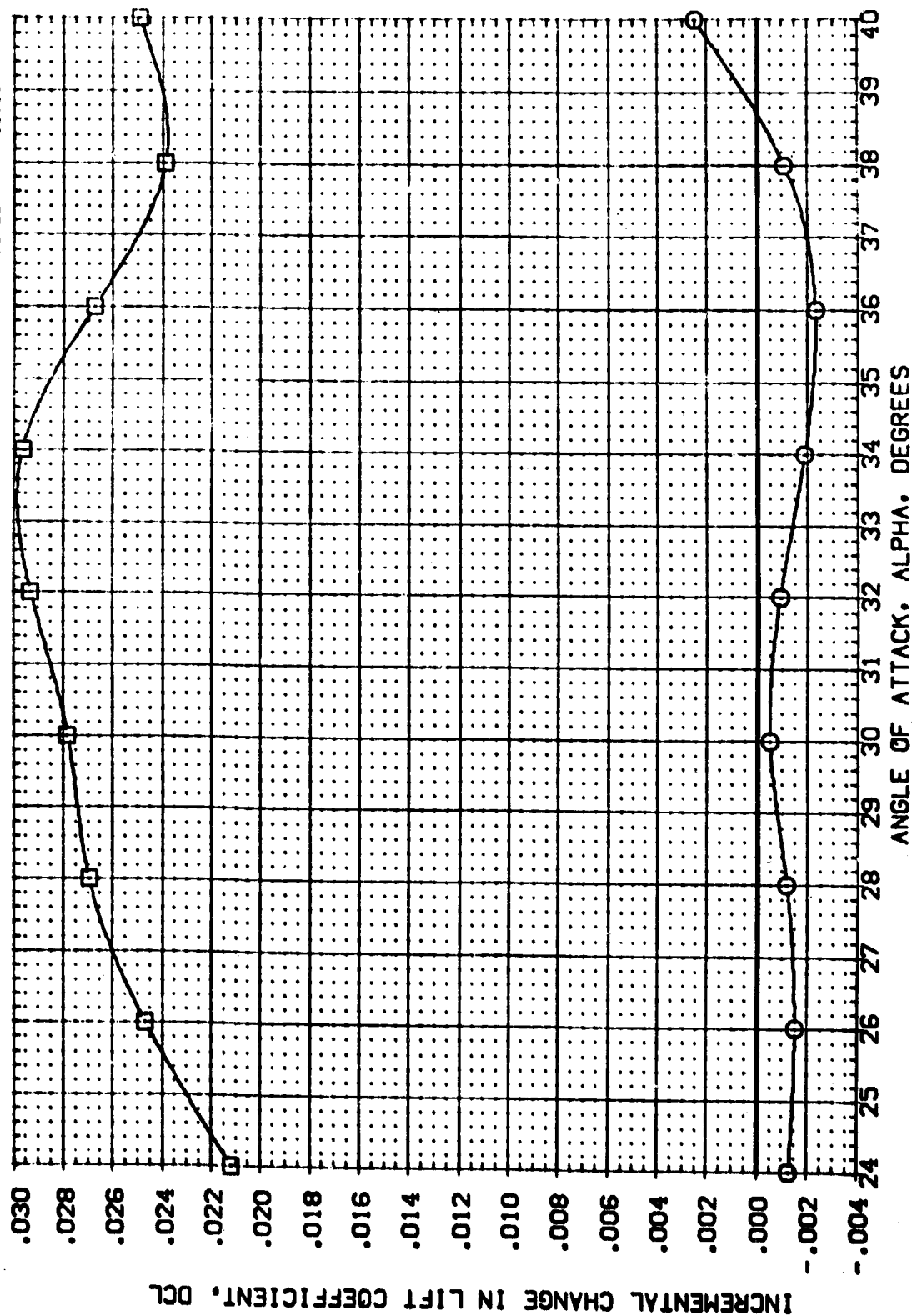



FIG. 4.D.3 MACH 10.29 INCREMENTAL BODY FLAP EFFECTS

(A)MACH = 10.29



DATA SET SYMBOL: (F80036) (F80038)  CONFIGURATION DESCRIPTION: AVES 3.5-160 DA11B (B10F4C507G3N8)(V87E18)(V88G) -14.250 DELDF: ELEVON: SPOBRK: RUDDER: REFERENCE INFORMATION: SQ.FT. SREF: 2690.0000 IN. LREF: 474.8100 IN. BREF: 936.6800 IN. XPRP: 1076.4800 IN. YPRP: .0000 IN. ZPRP: 400.0000 IN. SCALE: .0150

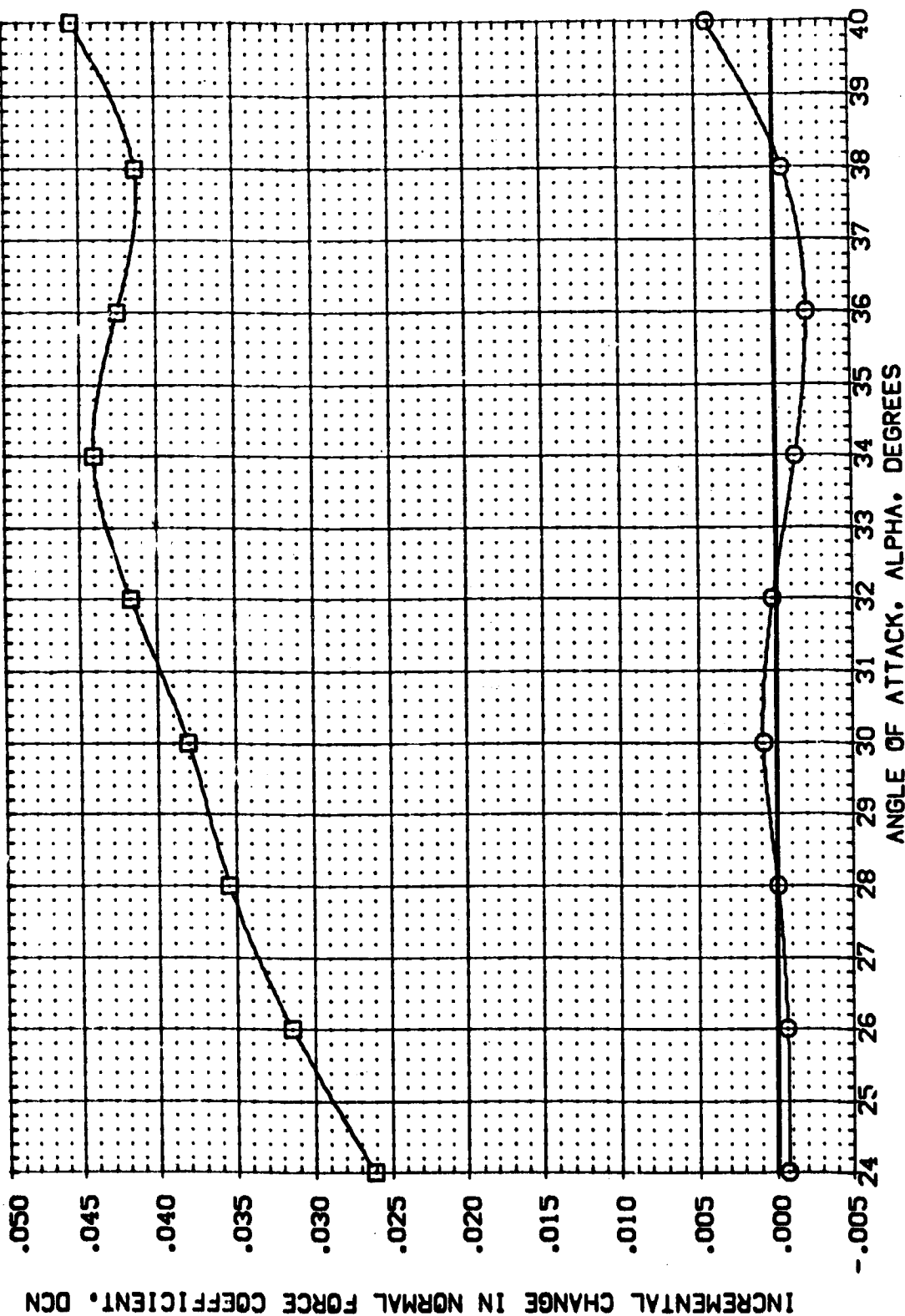


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODY FLAP EFFECTS

(A)MACH = 10.29

DATA SET SYMB. CONFIGURATION DESCRIPTION

(FBR006) AYES 3.5-180 CA118 (B10F4C507G048)(W67E18)(V5N5) -14.250

(FBR008) AYES 3.5-180 CA118 (B10F4C507G048)(W67E18)(V5N5) 13.750

DELDF ELEVON SPORWK RUDDER

REF. 2690.0000 SQ.FT.

REF. 474.8100 IN.

REF. 936.6800 IN.

XPRP 1076.4800 IN.

YPRP .0000 IN.

ZPRP 400.0000 IN.

SCALE .0150

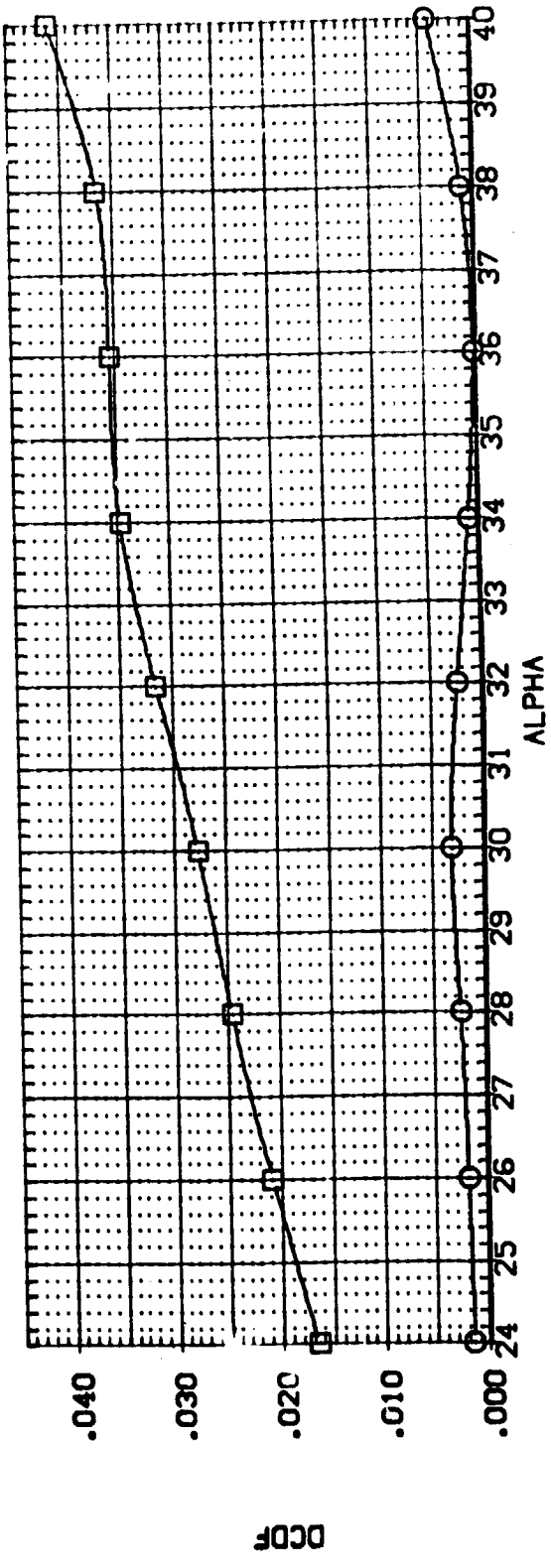
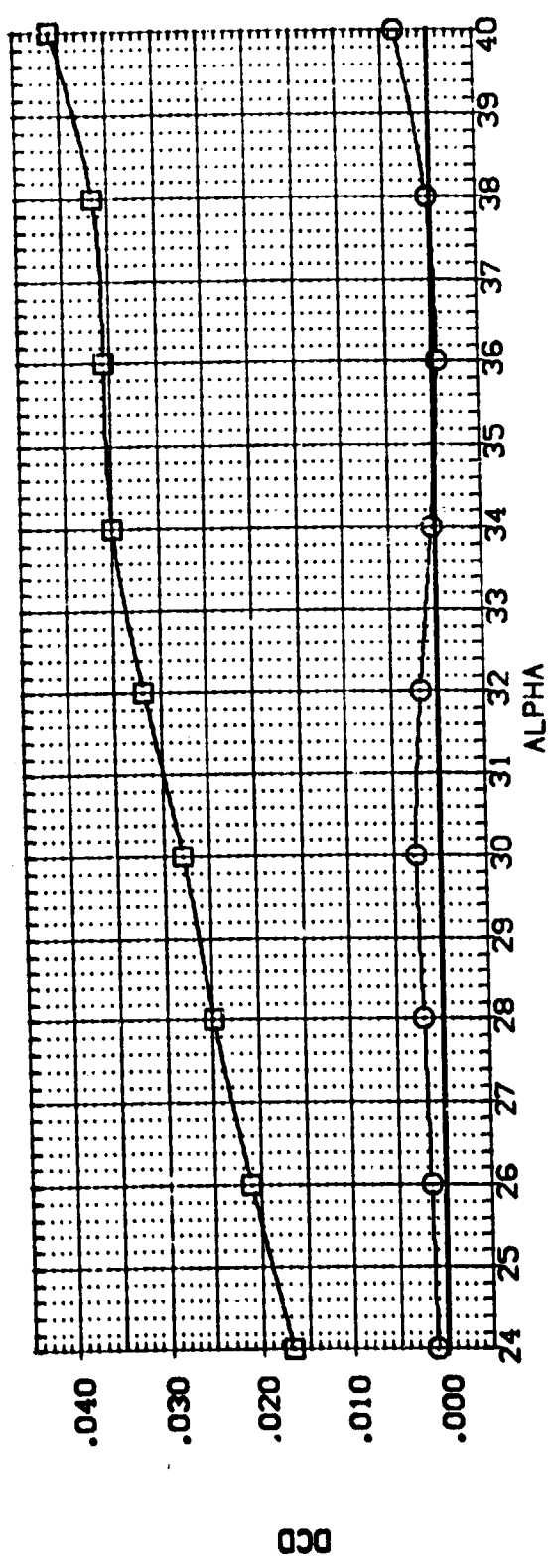


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODY FLAP EFFECTS

(A) MACH = 10.29

DATA SET SYMBOL: (FB0036)
 (FB0036)

CONFIGURATION DESCRIPTION

AVES 3.5-160 DA118 (810F4C507Q48)(V87E18)(V59S)
 AVES 3.5-160 DA118 (810F4C507Q48)(V87E18)(V59S)

DELEDF ELEVON SPURON RUDDER

REFERENCE INFORMATION
 SREF 2590.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

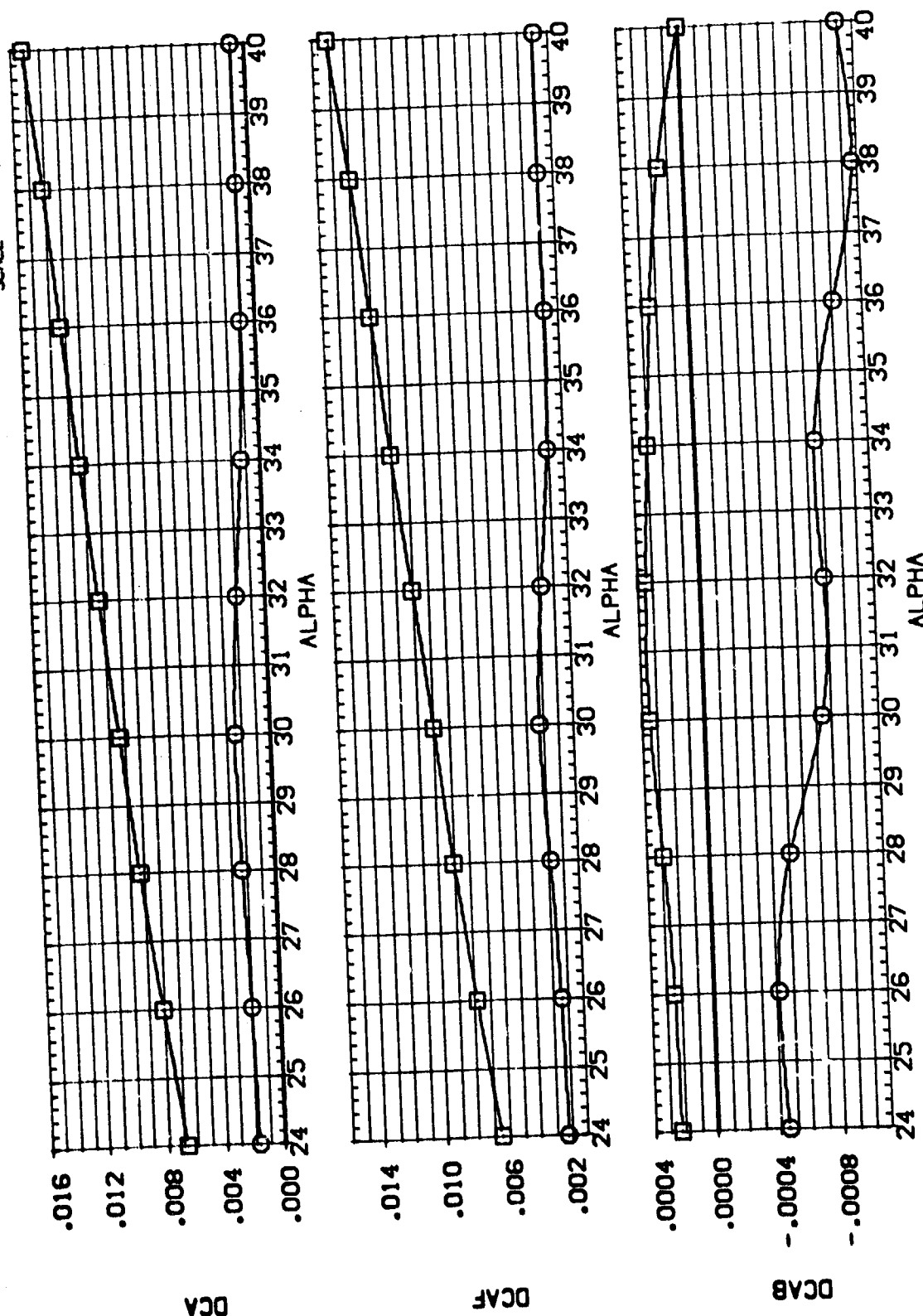


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODY FLAP EFFECTS

(A) MACH = 10.29

AMES 3.5-160 0A11B (B10F4C507M3N8)(V87E18)(V5R5)(FBX036)

SYMBOL
□ ◇ ▲

ALPHA
24.000
26.000
28.000
30.000
32.000

MACH
ELWH-L
RUDDER
ELEVON

PARAMETRIC VALUES
10.250 BETA
.003 ELVN-R
.000 SPDRX
.000 AILRON

.000 DATASET
.000 FBX036
54.920 FBX038
.000

DATA SOURCE
DELBOF
-14.250
13.750

DATASET
FBX037

DELBOF
.000

REFERENCE INFORMATION
SREF 2650.0000 SQ.FT.
LREF 474.8100 IN.
SREF 936.6800 IN.
XREF 1076.4800 IN.
YREF 400.0000 IN.
ZREF 400.0000 IN.
SCALE .0150

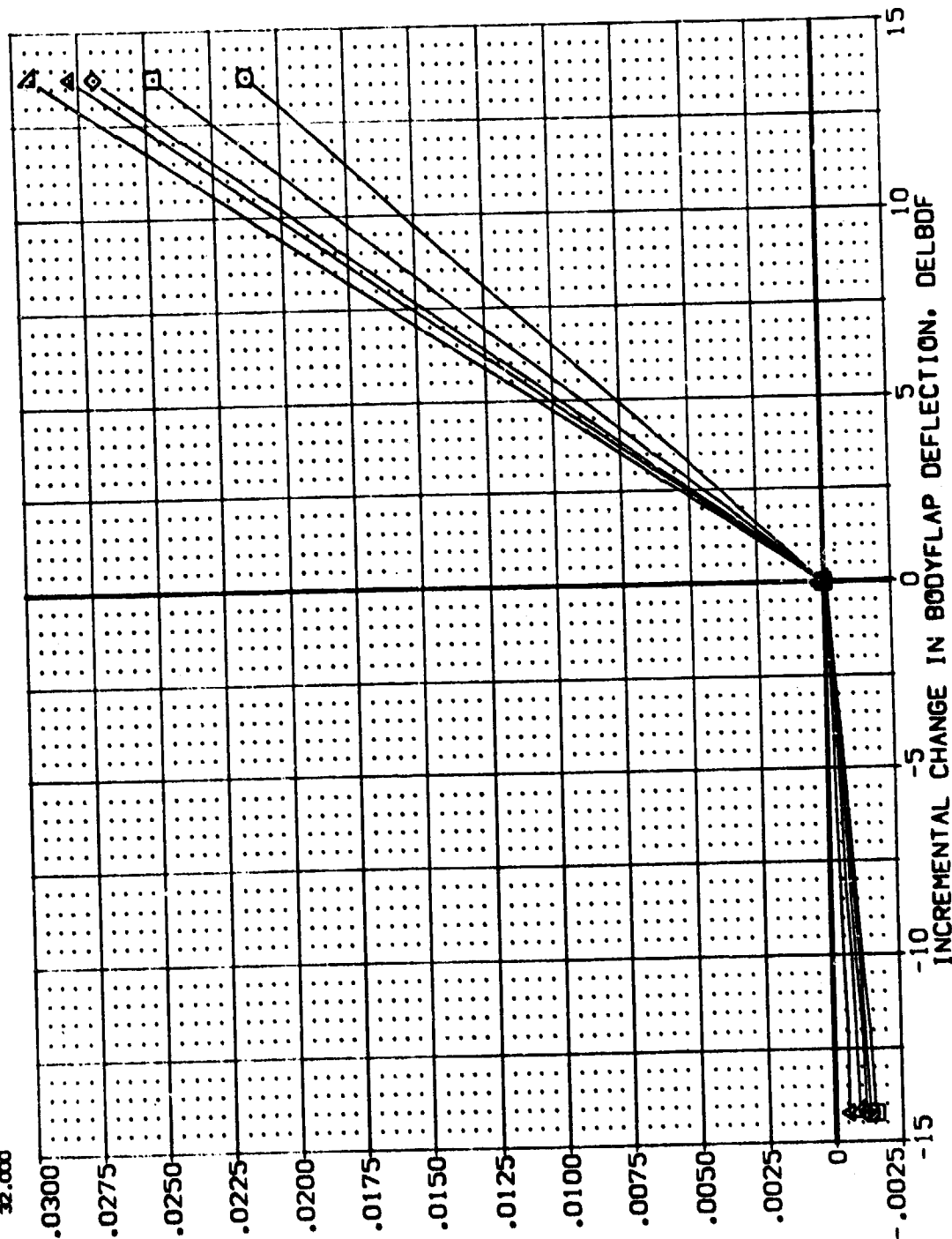


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (810F4C507M3N8)(W87E18)(V5R5)(FBX036)

SYMBOL
○ □ ◇ △

PARAMETRIC VALUES
ALPHA 34.000 MACH 10.290 BETA .000 ELVN-L .000 ELVN-R .000 SPOBRK .000 AILRON .000
36.000 ELVN-L .000 ELVN-R .000 SPOBRK .000 AILRON .000
38.000 RUDDER .000 SPOBRK .000 AILRON .000
40.000 ELEVON .000 SPOBRK .000 AILRON .000

DATA SOURCE
LCLBOF -14.250
FBX037 13.750

DATASET
FBX036 .000
FBX038 54.920

REFERENCE INFORMATION
SREF 2690.0000 50.FT.
LREF 474.8100 IN.
BREF 936.6900 IN.
VREF 1076.4800 IN.
ZVREF 400.0000 IN.
SCALE .0150

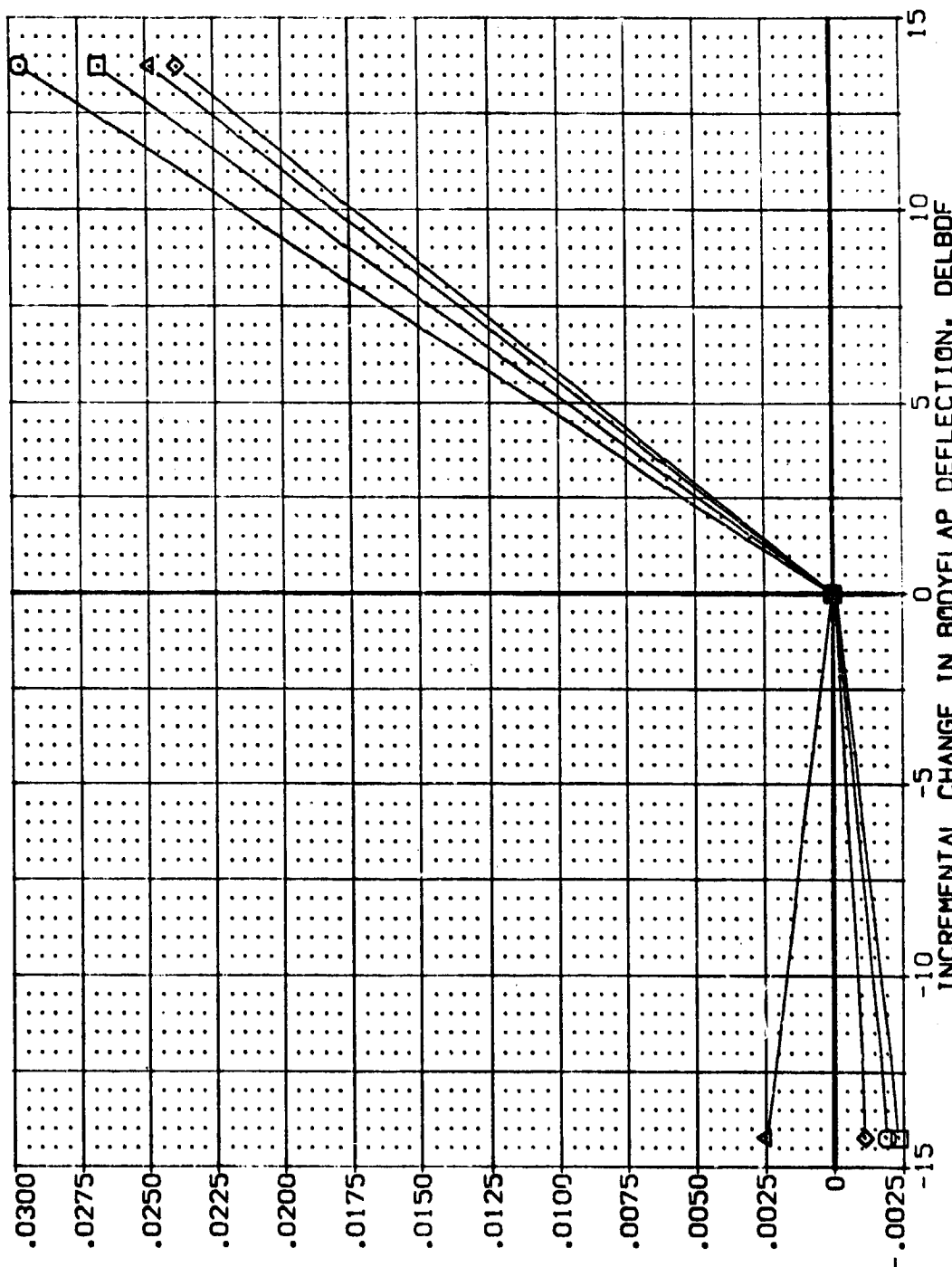


FIG. 4.0.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX036)

SYMBOL
 ○ □ ◇ △

ALPHA
 24.000
 26.000
 28.000
 30.000
 32.000

MACH
 ELVN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
 10.250 BETA
 .000 ELVN-R
 .000 SPOBRK
 .000 AILRON

.000 FBX036
 .000 FBX038
 54.920 FBX038
 .000

DATA SOURCE
 .000 FBX036
 .000 FBX038
 13.750

DELBOF
 -14.250
 13.750

DELBOF
 .000
 .000

DELBOF
 .000
 .000

DELBOF
 .000
 .000

DELBOF
 .000
 .000

DELBOF
 .000
 .000

REFERENCE INFORMATION
 2690.0000 SQ.FT.
 474.8100 IN.
 936.5900 IN.
 1076.4800 IN.
 400.0000 IN.
 .0150 SCALE

INCREMENTAL CHANGE IN NORMAL FORCE COEFFICIENT, DCN

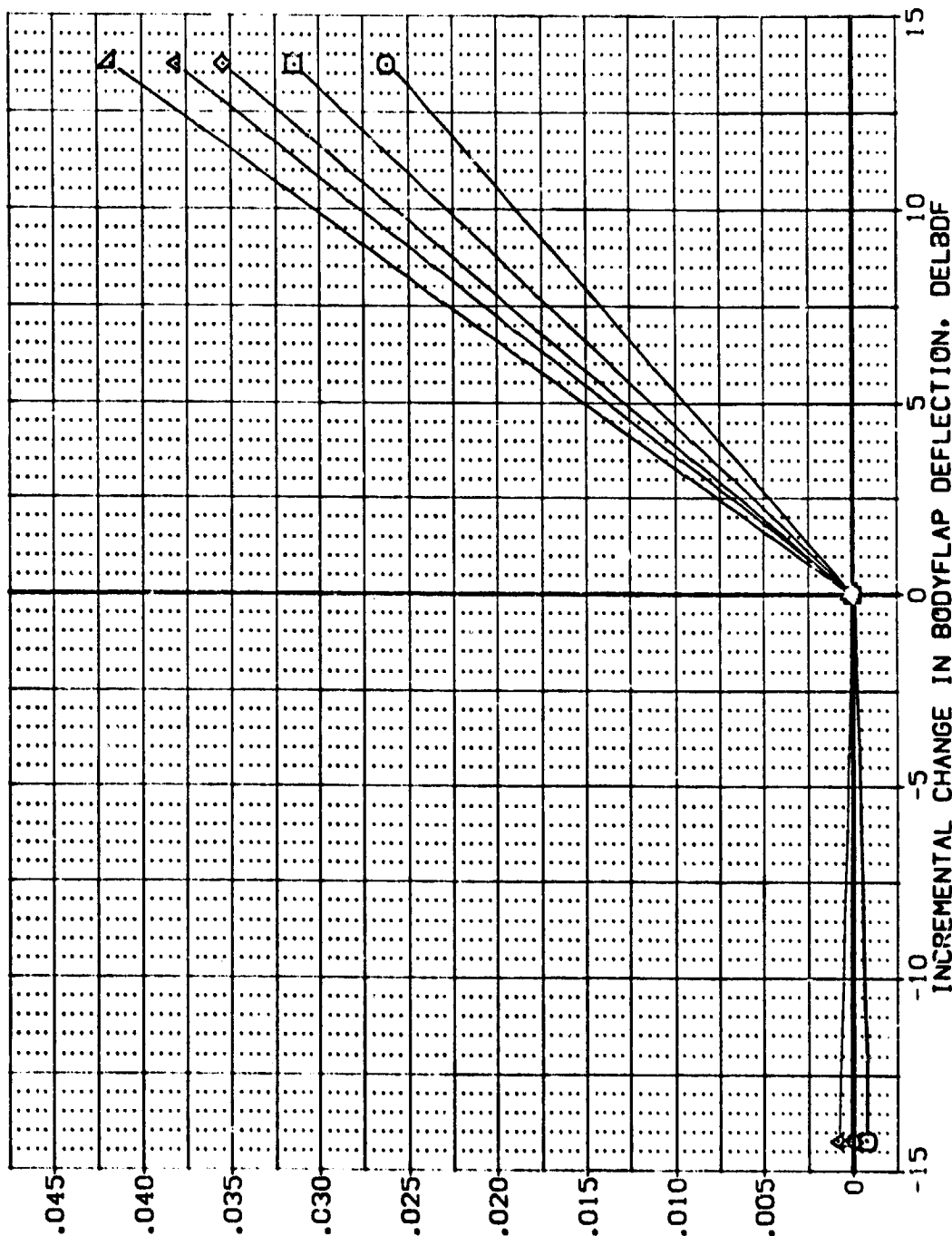


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX036)

SYMBOL
 ○ □ ◇ △

PARAMETRIC VALUES
 ALPHA 34.000 MACH 10.290 BETA .000
 36.000 ELVN-L .000 ELVN-R .000
 38.000 RUDDER .000 SPOBRK 54.920
 40.000 ELEVON .000 AILRON .000

DATA SOURCE
 DELBOF -14.250
 FBX037 13.750

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 536.6800 IN.
 XMRP 1076.4800 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

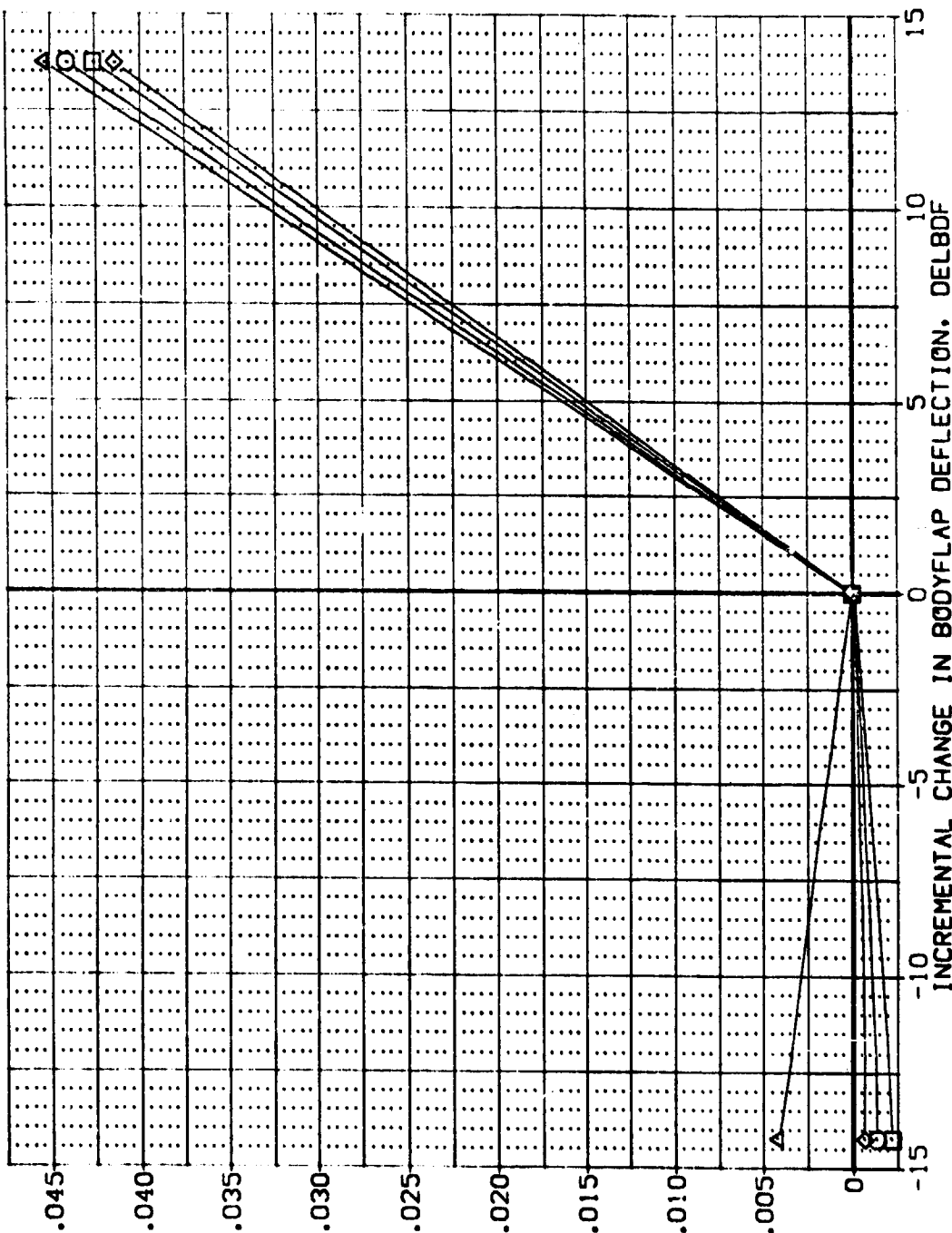


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (B10F4C5D7M3N8)(W87E18)(V5R5)(FBX036)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	MACH	DELBOF	DELBOF	SREF	SO.FT.
24.000	10.290	.000	.000	LREF	IN.
26.000	.000	.000	.000	BREF	IN.
28.000	.000	.000	.000	XREF	IN.
30.000	.000	.000	.000	YREF	IN.
32.000	.000	.000	.000	ZREF	IN.
				SCALE	

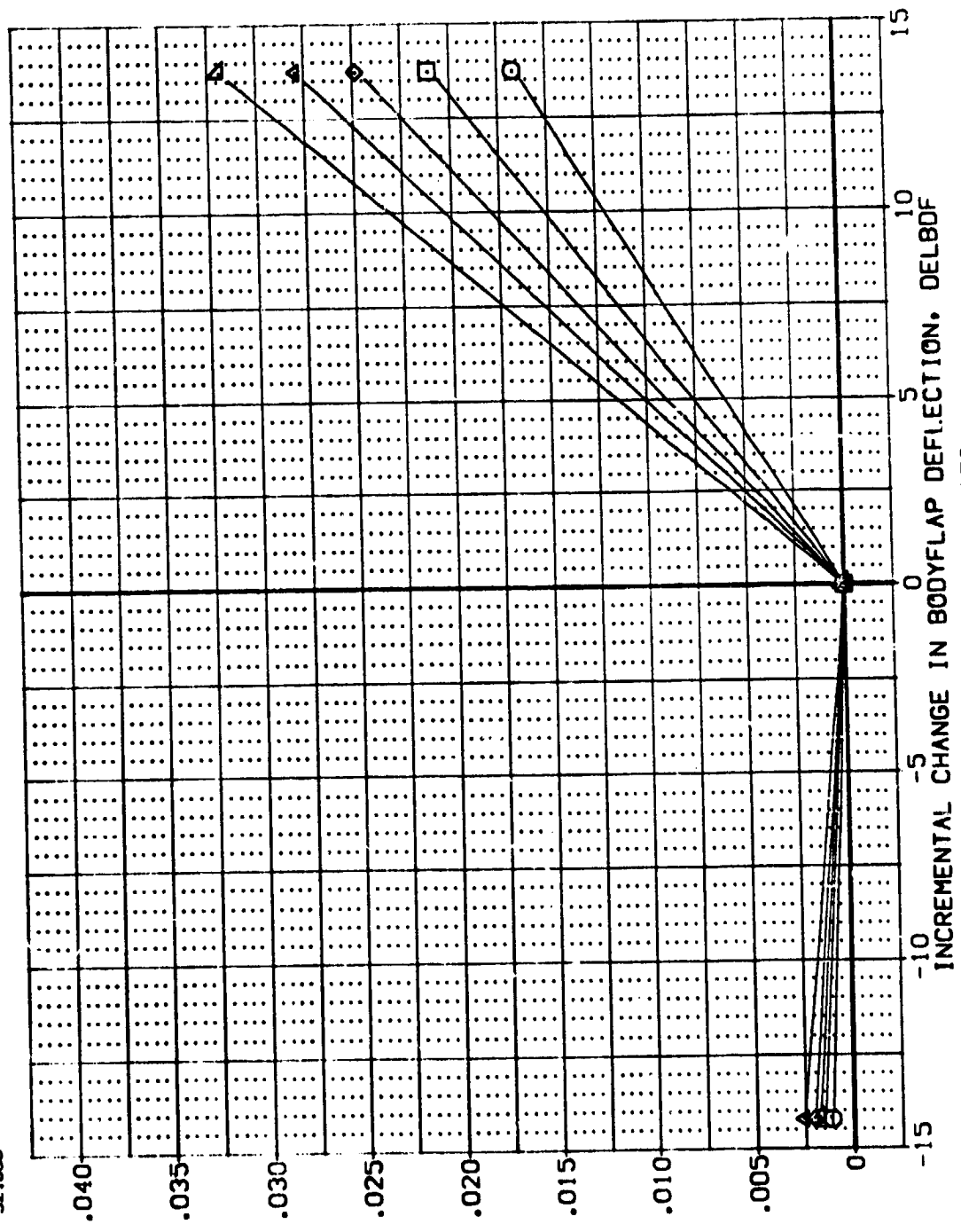


FIG. 4.0.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

SYMBOL

ALPHA	MACH
34.00C	ELVN-L
36.000	RUOER
38.000	ELEVON
40.000	

PARAMETRIC VALUES	
BETA	10.290
ELVN-R	.000
SPOBPK	.000
AIRLON	.000

.000	DATASET
.000	FBX036
54.920	FBX038
.000	

DATA SOURCE
DELBOF
-14.250
13.750

DATA SET DELBOT
FDX037 .000

REFERENCE INFORMATION	
2690.0000	50. FT.
474.8100	N.
936.5800	N.
1076.4800	N.
0000.0000	N.
400.0000	N.
0150	

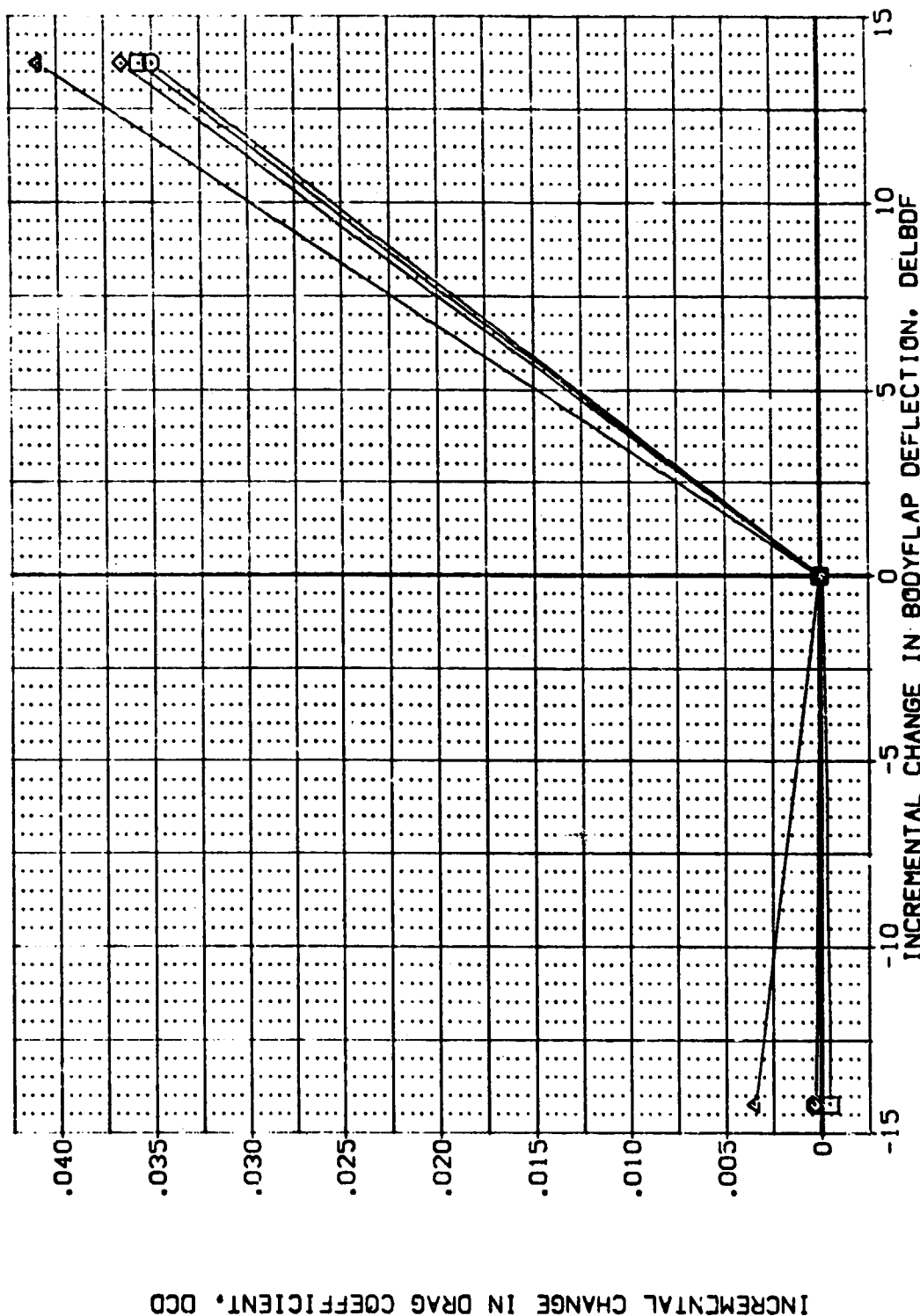


FIG. 4.0.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

2690.0000	sq.ft.
474.8100	in.
936.6800	in.
1076.4800	in.
.0000	in.
400.0000	in.
.0150	in.

SYMBOL ○ □ ◇ △ ▴

ALPHA	MACH	BETA	PARAMETRIC VALUES
24,000	ELVN-L	10,290	ELVN-R
26,000	NUDGE	.000	SPDRK
28,000		.000	AILRON
30,000	ELEVON	.000	

ALPHA
24.000
26.000
28.000
30.000
32.000

DATA SOURCE
DELEDF
-14.250
13.750

.000	DATASET
.000	FBX036
54.920	FBX038
.000	

PARAMETRIC VALUES
BETA
10.290
ELVN-R
.000
SPOBK
.000
AIRON
.000

MACH
VN-L
RUDER
ELE VON

ALPHA
24.000
26.000
28.000
30.000
32.000

SYMBOL ○ □ ◇ ◀ ▶

INCREMENTAL CHANGE IN AXIAL FORCE COEFFICIENT, DCA

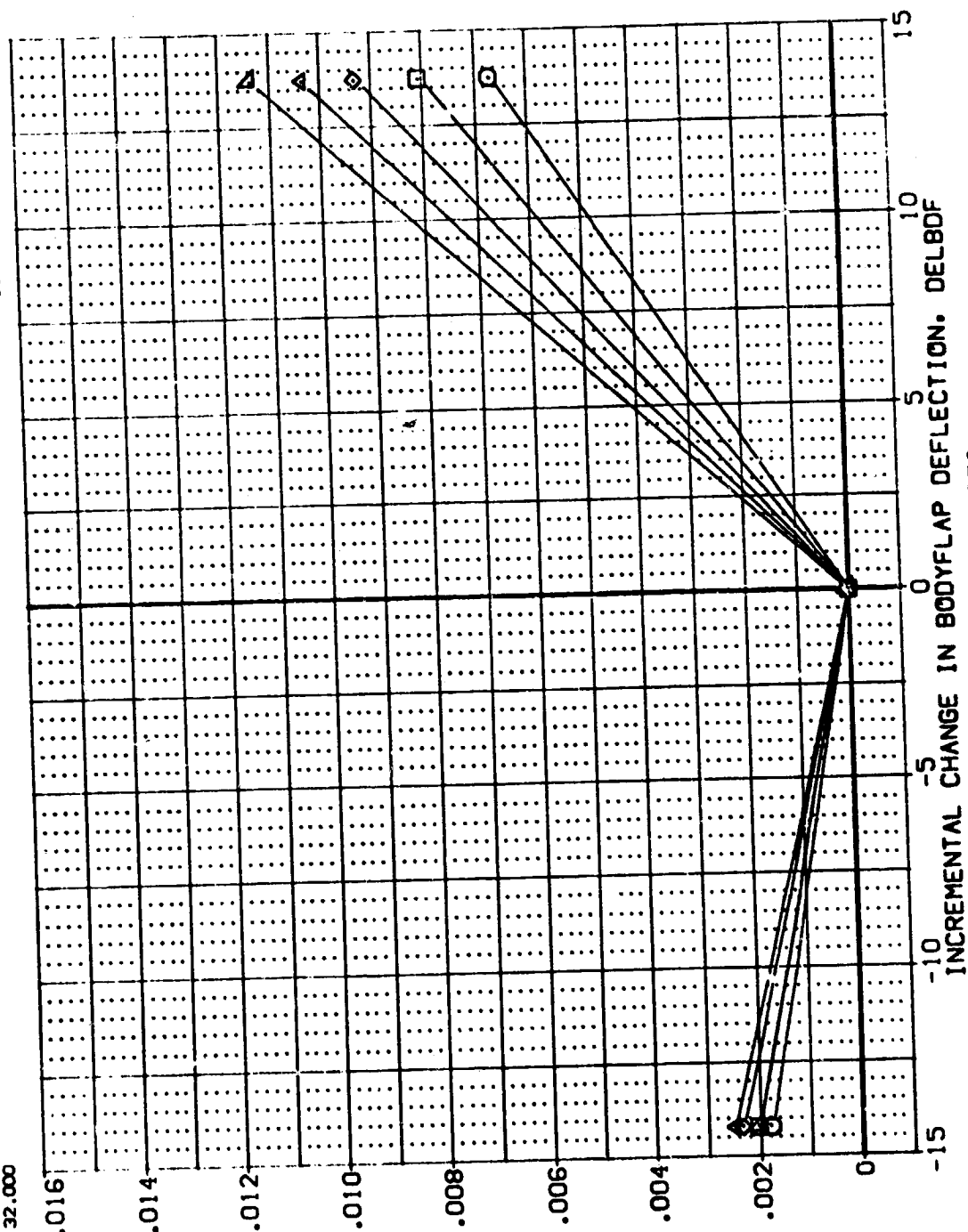


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

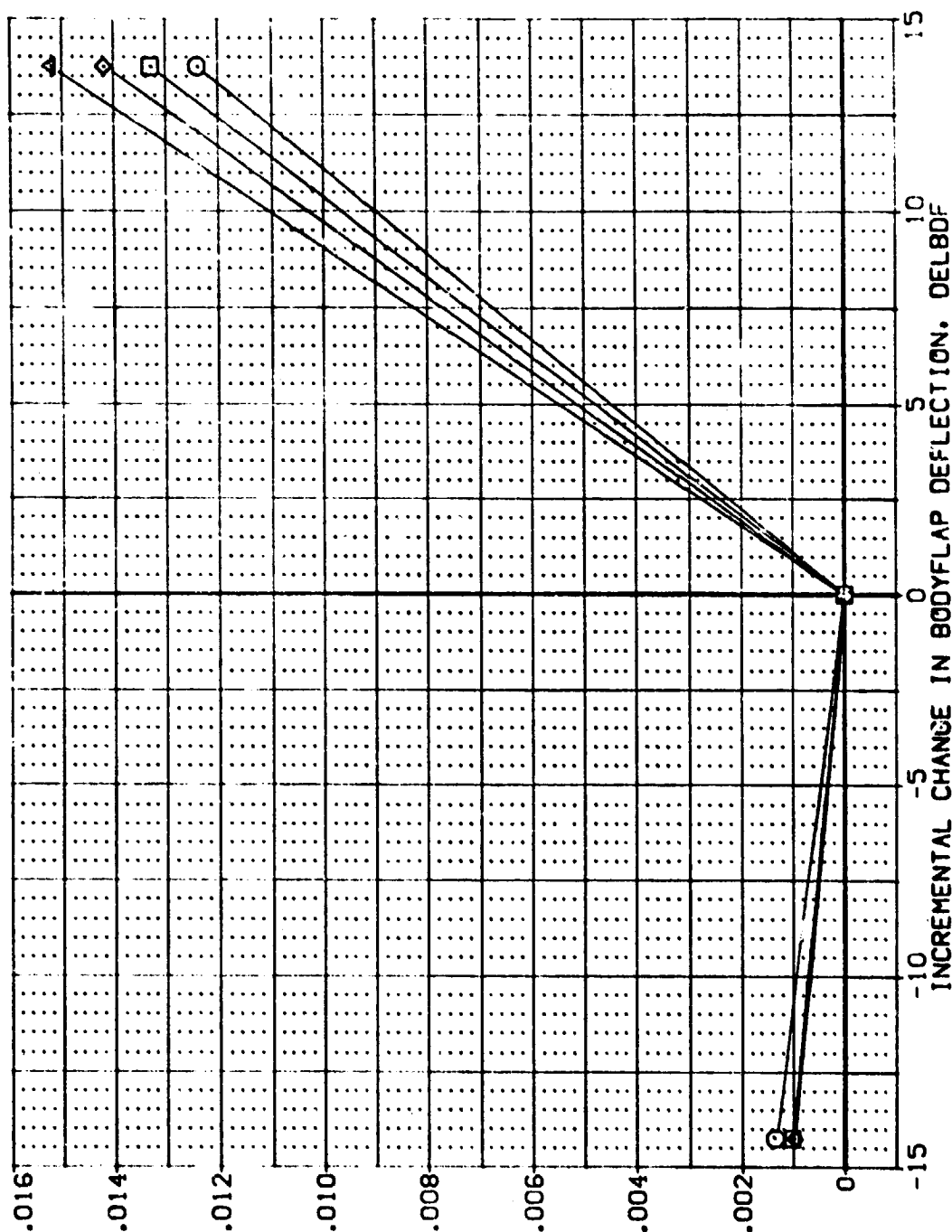
AMES 3.5-160 0A118 (810F4C5D7M3N8)(W87E18)(V5R5)(FBX036)

SYMBOL
 ○ □ ◇ ▲

PARAMETRIC VALUES
 ALPHA 34.000 MACH 10.290 BETA .000
 36.000 ELVN-L .000 ELVN-R .000
 38.000 RUDDER .000 SPOBRK .000
 40.000 ELEVON .000 AILRON .000

DATA SOURCE
 DELBDF .000 DATASET FBX036
 FBX037 FBX038
 FBX039 FBX040

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN
 BREF 936.6900 IN
 YARP 1076.4800 IN
 YTRP .0000 IN
 ZTRP 400.0000 IN
 SCALE .0150



INCREMENTAL CHANGE IN AXIAL FORCE COEFFICIENT, DCA

FIG. 4.0.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (810F4C507M3N8)(W87E18)(V5R5)(FBX036)

PARAMETRIC VALUES		DATA SOURCE		REFERENCE INFORMATION	
ALPHA	MACH	DELBOF	DELBOF	SREF	50.FT.
24.000	10.250	.000	FBX036	LREF	IN.
26.000	.000	.000	FBX036	BREF	IN.
28.000	.000	54.920	FBX036	WREF	IN.
30.000	.000	.000		ZREF	IN.
32.000				SCALE	.0150

SYMBOL
 ▽ ◆ □
 ▽ ◆ □

INCREMENTAL CHANGE IN AFT PITCHING MOMENT COEFFICIENT, DCLMAF

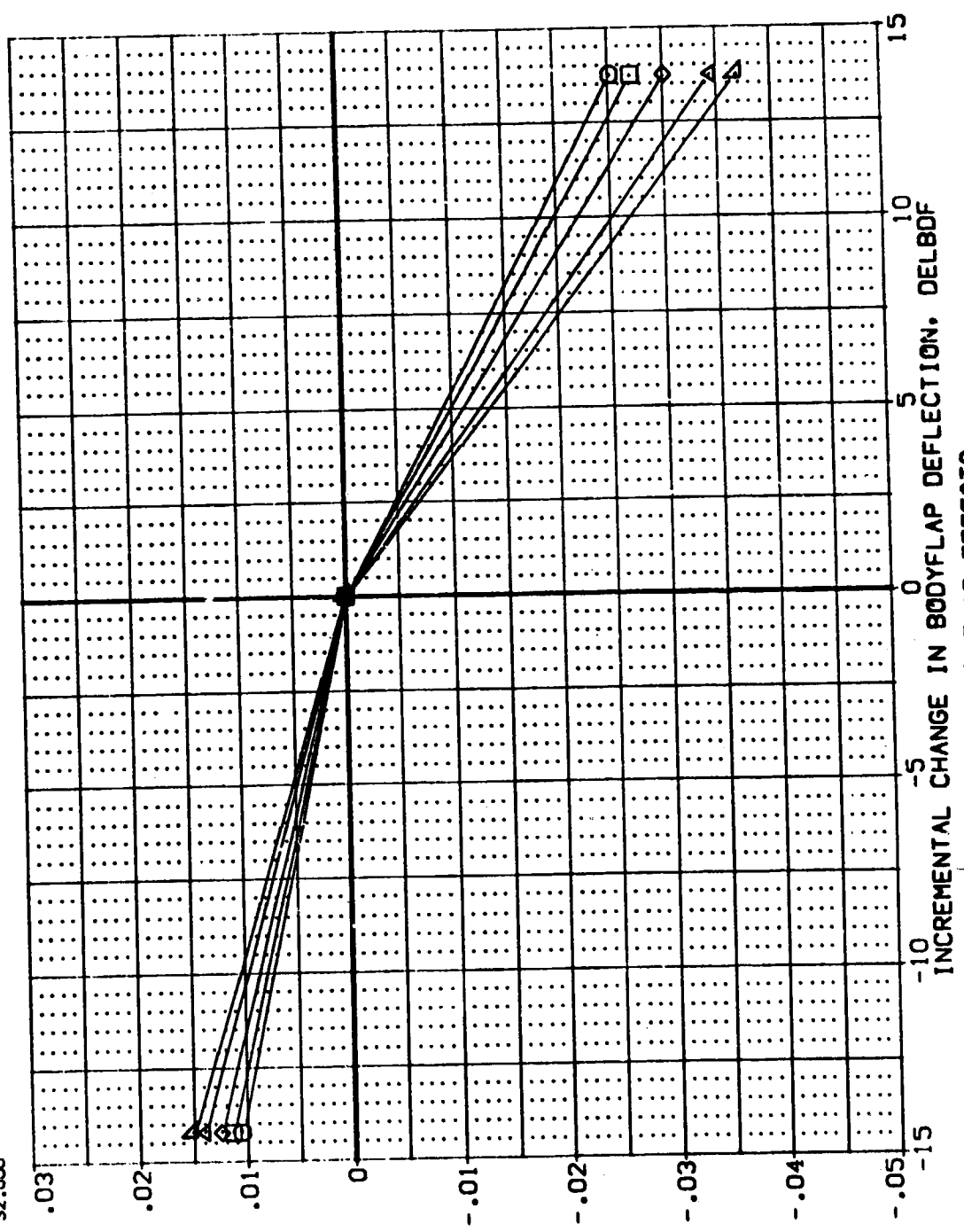


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A11B (B10F4C507M3N8)(W87E18)(V5R5)(FBX036)

SYMBOL
 □
 ◇
 △

ALPHA
 34.000
 36.000
 38.000
 40.000

MACH
 10.290
 ELVN-L
 RUDDER
 ELEVON

PARAMETRIC VALUES
 10.290 BETA
 .000 ELVN-R
 .000 SPOBRK
 .000 AILRON

DATA SOURCE
 DELBOF
 FBX036
 FBX038

DELBOF
 -14.250
 13.750

CATASET
 FBX037

REFERENCE INFORMATION
 SREF 2690.0000 SQ.F.
 LREF 474.8100 IN.
 BREF 936.5800 IN.
 VREF 1076.4800 IN.
 YREF .0000 IN.
 ZREF 400.0000 IN.
 SCALE .0150

INCREMENTAL CHANGE IN AFT PITCHING MOMENT COEFFICIENT, DCLMAF

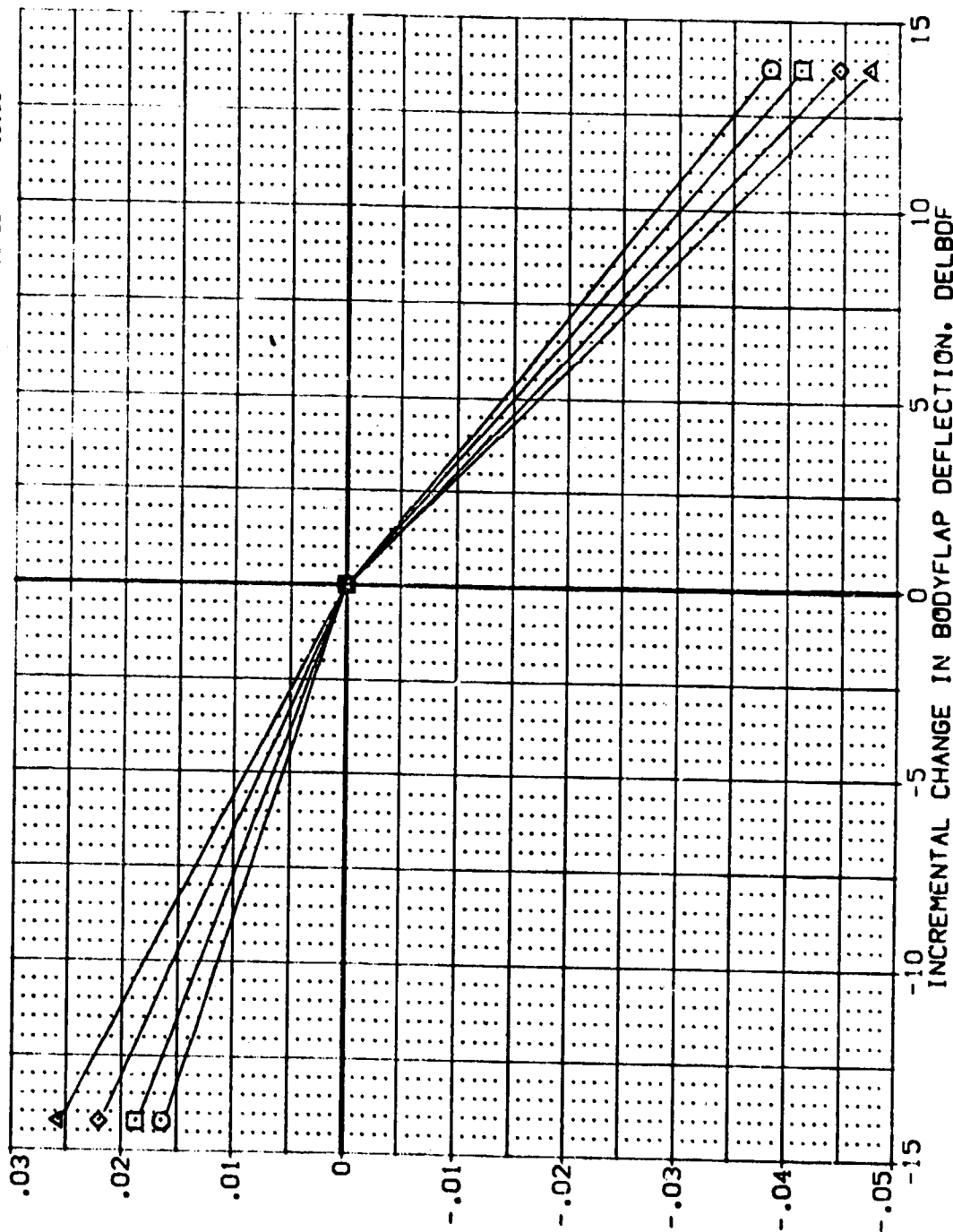


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

AMES 3.5-160 0A118 (810F4C507M3N8)(W87E18)(V5R5)(FBX036)

SYMBOL
 ▲
 ◇
 □
 ○

PARAMETRIC VALUES
 ALPHA 34.000 MACH 10.290 BETA .000 ELVN-L .000 ELVN-R .000 SPDRK .000 AILRON .000
 36.000 ELVN-L .000 ELVN-R .000 SPDRK .000 AILRON .000
 38.000 ELVN-L .000 ELVN-R .000 SPDRK .000 AILRON .000
 40.000 ELVN-L .000 ELVN-R .000 SPDRK .000 AILRON .000

DATA SOURCE
 DELBOF
 FBX037

DELBOF
 FBX036
 FBX038
 FBX039

DELBOF
 FBX036
 FBX038
 FBX039

DELBOF
 FBX036
 FBX038
 FBX039

INCREMENTAL CHANGE IN FORWARD PITCHING MOMENT COEFFICIENT, DCLMFD

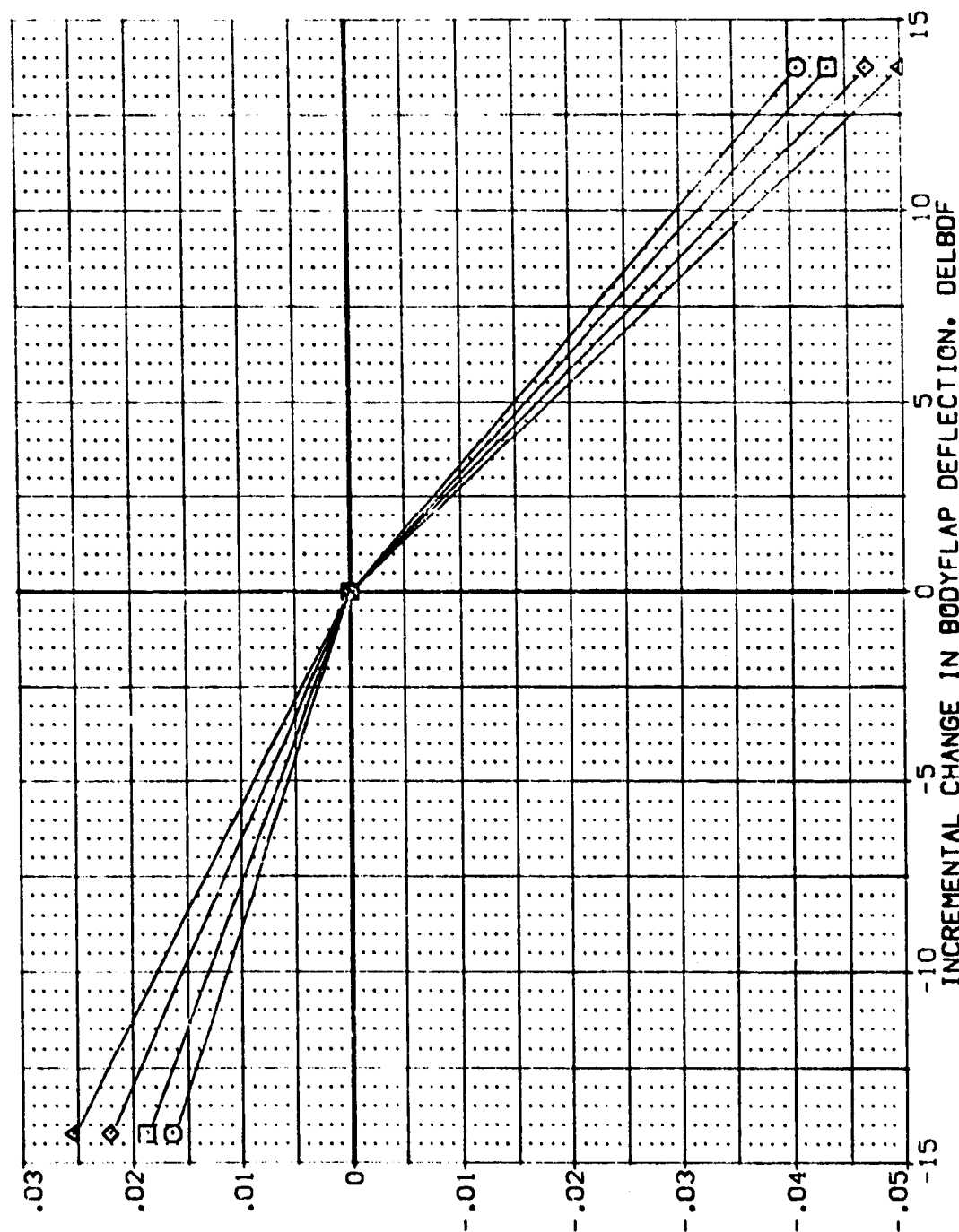


FIG. 4.D.3 MACH 10.29 INCREMENTAL BODYFLAP EFFECTS

DATA SET SYMBOL: ☐ (19X047) ☐ (19X064) CONFIGURATION DESCRIPTION: AVES 3.5-160 DAI1B (B10F4C507H348)(V67E18)(V59S) DELBOF: -14.250 ELEVON: .000 SPOBRK: 54.520 RUDDER: .000

REFERENCE INFORMATION: SREF: 2690.0000 SO.FT.: 50.0000 LREF: 474.8100 IN.: 1076.4800 YPRP: .0000 IN.: 400.0000 ZPRP: .0150 IN.: 400.0000 SCALE: .0150

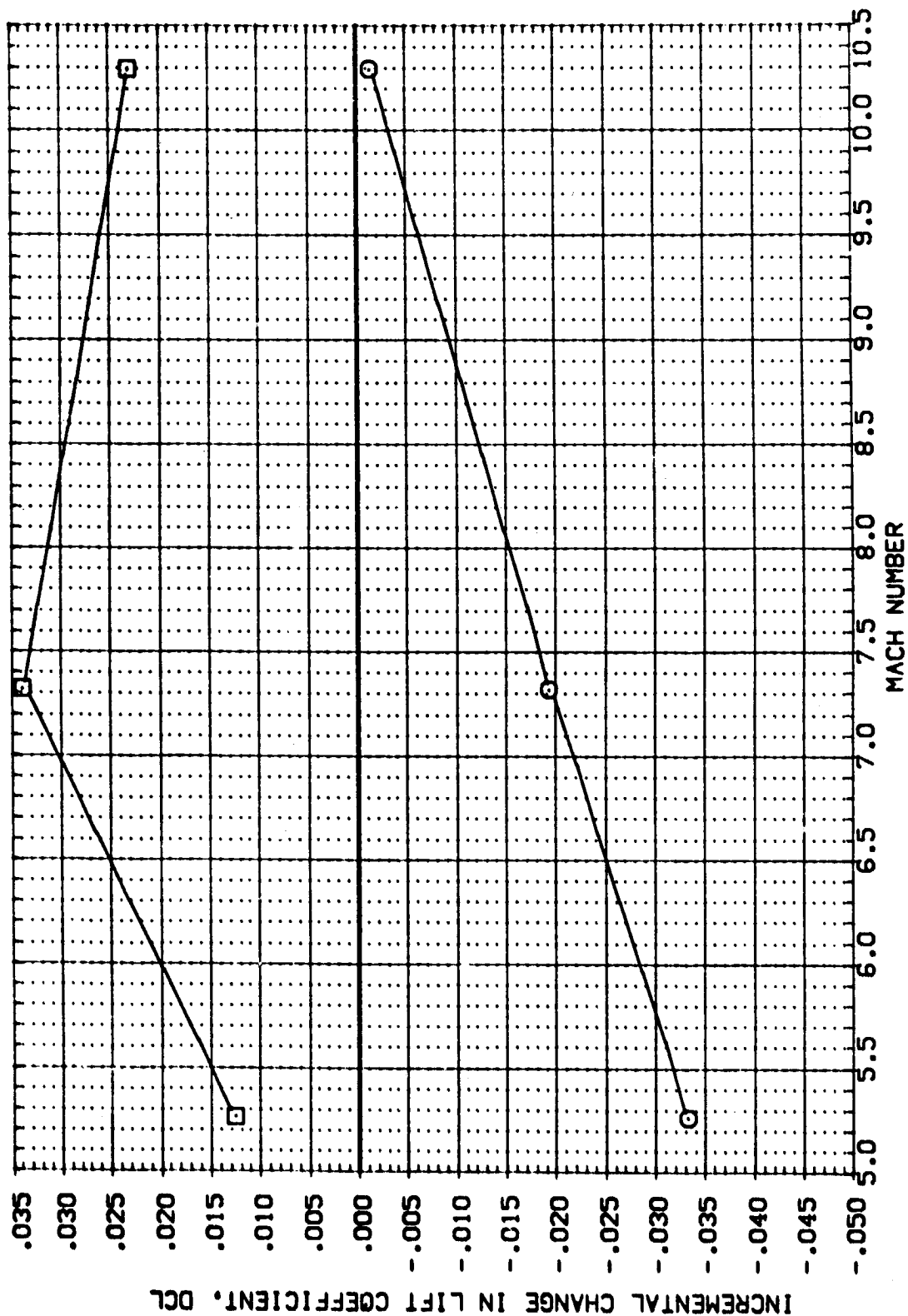


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(A) ALPHA = 25.00

DATA SET SYMBOL (180047) (180064)

CONFIGURATION DESCRIPTION
 AYES 3.5-160 DA118 (B10F4CS07H3G)(V67E18)(V59S)
 AYES 3.5-160 DA118 (B10F4CS07H3G)(V67E18)(V59S)

DELREF
 -14.250
 13.750

ELEVON
 .000
 .000

SPODBK
 S4.520
 S4.520

RUDDER
 .000
 .000

REFERENCE INFORMATION
 SREF 2630.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6400 IN.
 XMRP 1076.4600 IN.
 YMRP .0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

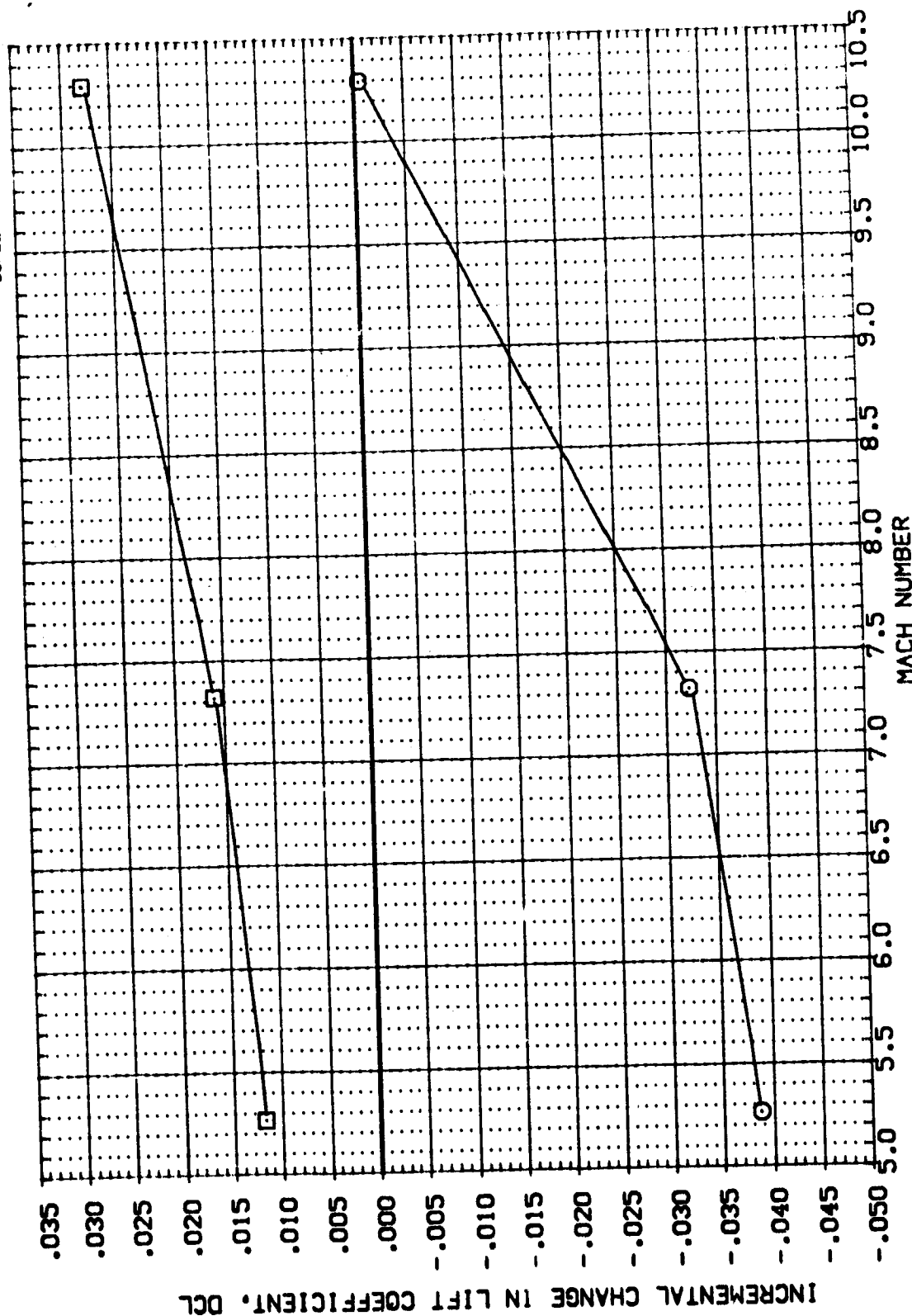


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(B) ALPHA = 30.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELBOF	ELEVON	SPOILER	RUDER	REFERENCE INFORMATION
(1BX047)	AVES 3.5-160 OA11B (810F4C507M348)(V87E18)(V87S)	-14.250	.000	54.920	.000	SREF 2690.0000 50.FT.
(1BX064)	AVES 3.5-160 OA11B (810F4C507M348)(V87E18)(V87S)	13.750	.000	54.920	.000	LREF 474.8100 IN.
						BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

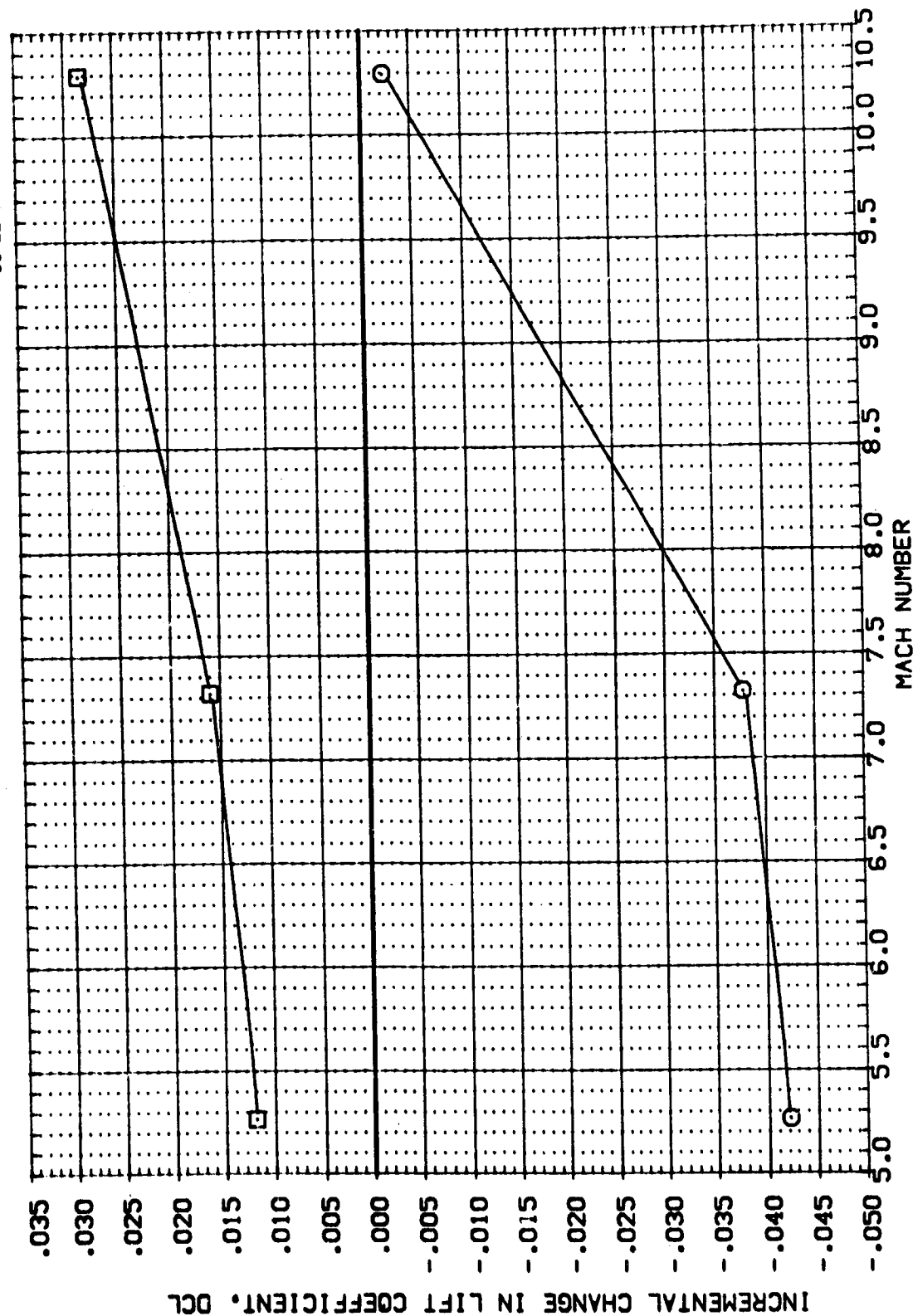


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(α) = 35.00

DATA SET SYMBOL: (180017) (180064) CONFIGURATION DESCRIPTION: AYES 3.5-160 0A118 (810F4C5D7G3-8)(V87E18)(V5K5) AYES 3.5-160 0A118 (810F4C5D7G3-8)(V87E18)(V5K5) DELBOF: 0.000 54.920 0.000 0.000 13.750 RUDDER: 0.000 0.000 0.000 0.000 0.000 REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 936.6900 IN. XMRP 1076.4800 IN. YMRP 400.0000 IN. ZMRP 400.0000 IN. SCALE: 0.150

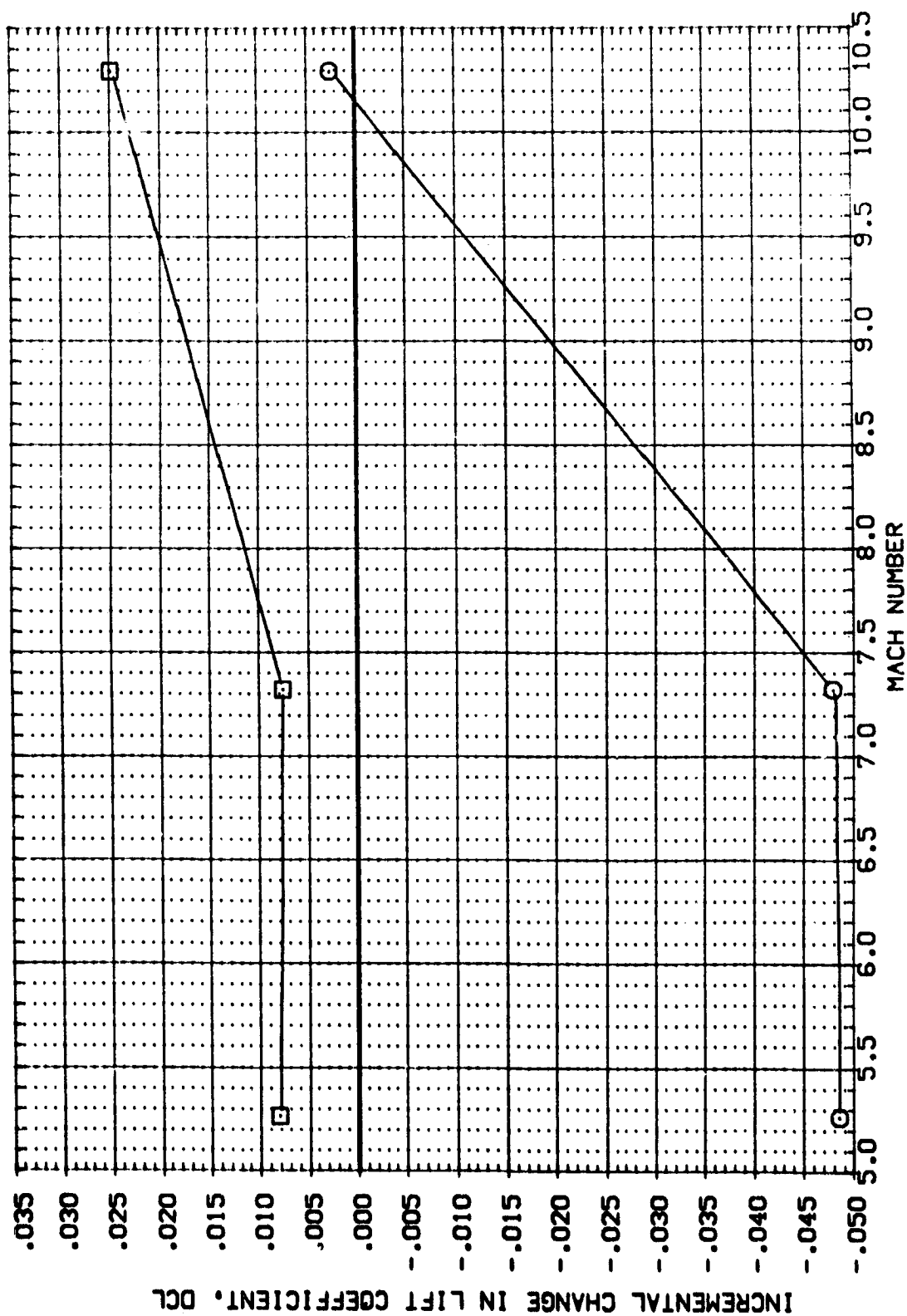


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(D) ALPHA = 40.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELBOF	ELEVON	SPDBRK	RUDDER	REFERENCE INFORMATION
(18X047)	AKES 3.5-160 CA11B (B10F4C507K3N8)(V87E18)(V5R5)	-14.250	.000	54.920	.000	SREF 2690.0000 SQ.FT.
(18X064)	AKES 3.5-160 CA11B (B10F4C507K3N8)(V87E18)(V5R5)	13.750	.000	54.920	.000	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XMRP 1076.1800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

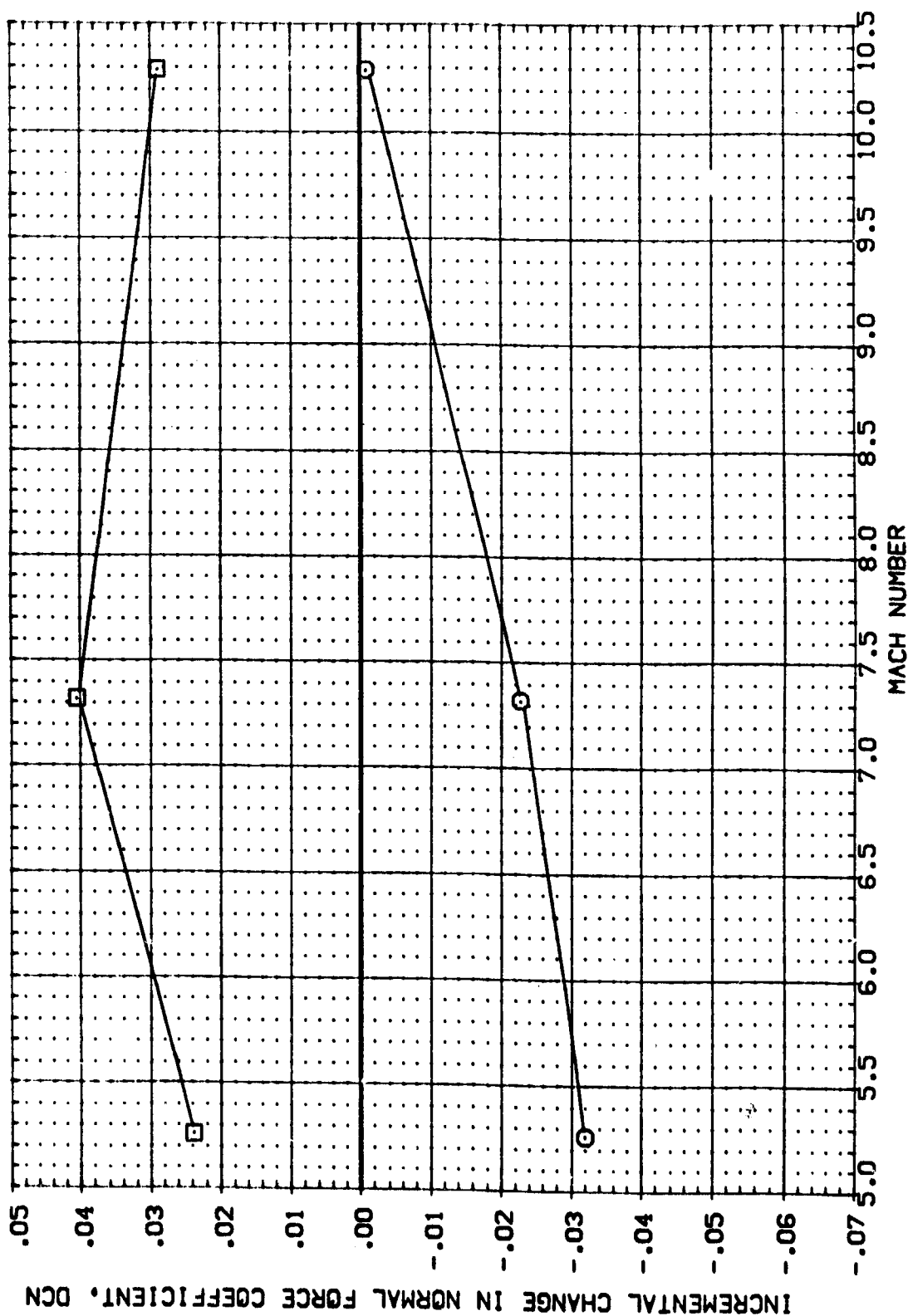


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(A) ALPHA = 25.00

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		DELTA OF		ELEVON		SPIDERS		RUDDER		REFERENCE INFORMATION	
(180047)	□	AVES 3.5-160	DA11B (810F4C507H3B)(V67E18)(V99S)	-14.250	.000	54.520	.000	54.520	.000	SREF	2630.0000	50. FT.	
(180054)	□	AVES 3.5-160	DA11B (810F4C507H3B)(V67E18)(V99S)	13.750	.000	54.520	.000	54.520	.000	LREF	474.8100	IN.	
										BREF	936.6800	IN.	
										XPRP	1076.4800	IN.	
										YPRP	400.0000	IN.	
										ZPRP	400.0000	IN.	
										SCALE	.0150		

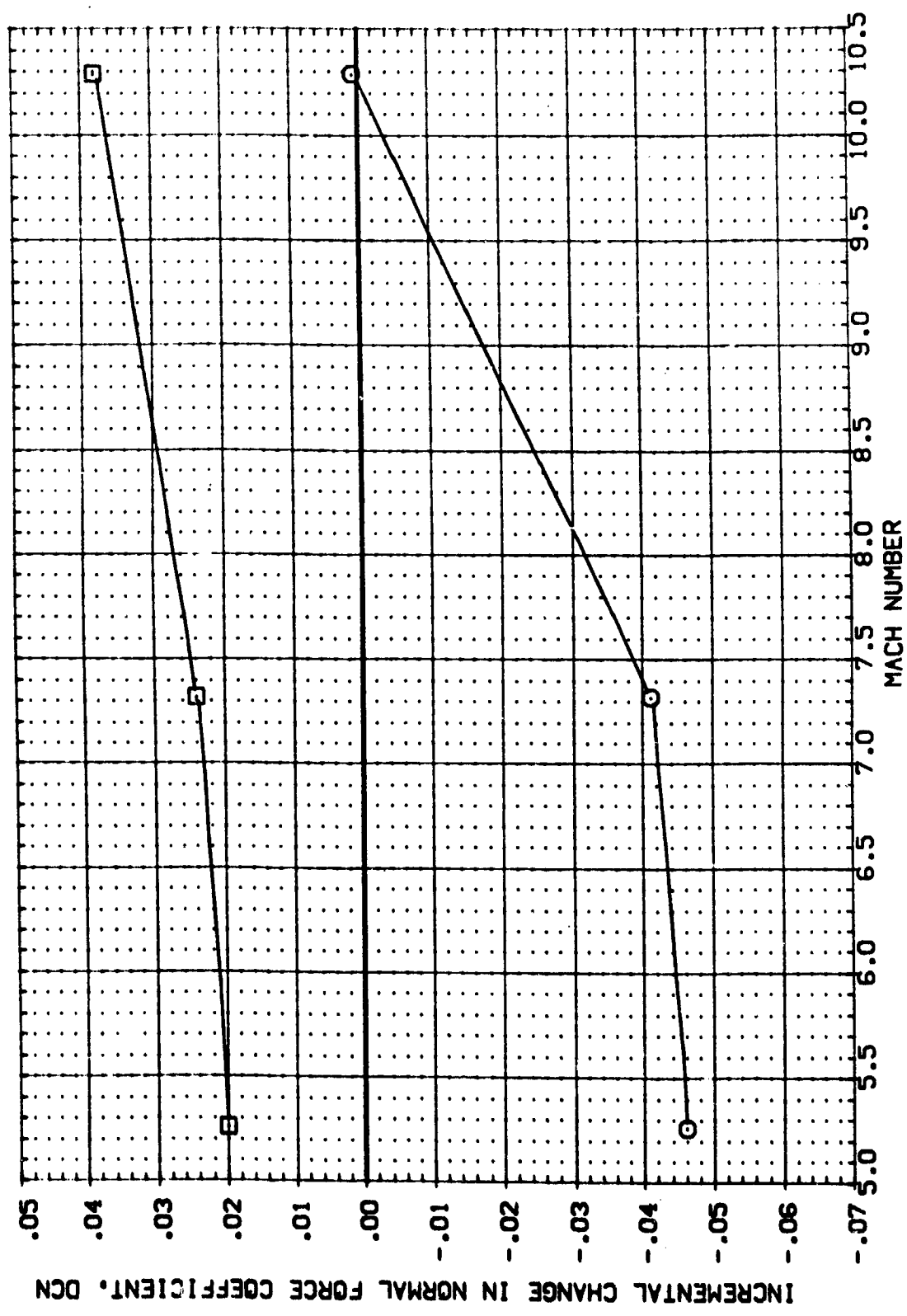


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(B) ALPHA = 30.00



DATA SET SYMBOL (18X047) (18X064) CD CONFIGURATION DESCRIPTION
AVES 3.5-160 OA11B (B10F4C507M2-B) (V87E18) (V59S)
AVES 3.5-160 OA11B (B10F4C507M2-B) (V87E18) (V59S)

DELTA% ELEVON SPOILER RUDDER
-14.250 .000 54.520 .000
13.750 .000 54.520 .000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 174.8100 IN.
BREF 936.6300 IN.
XMRP 1076.4800 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

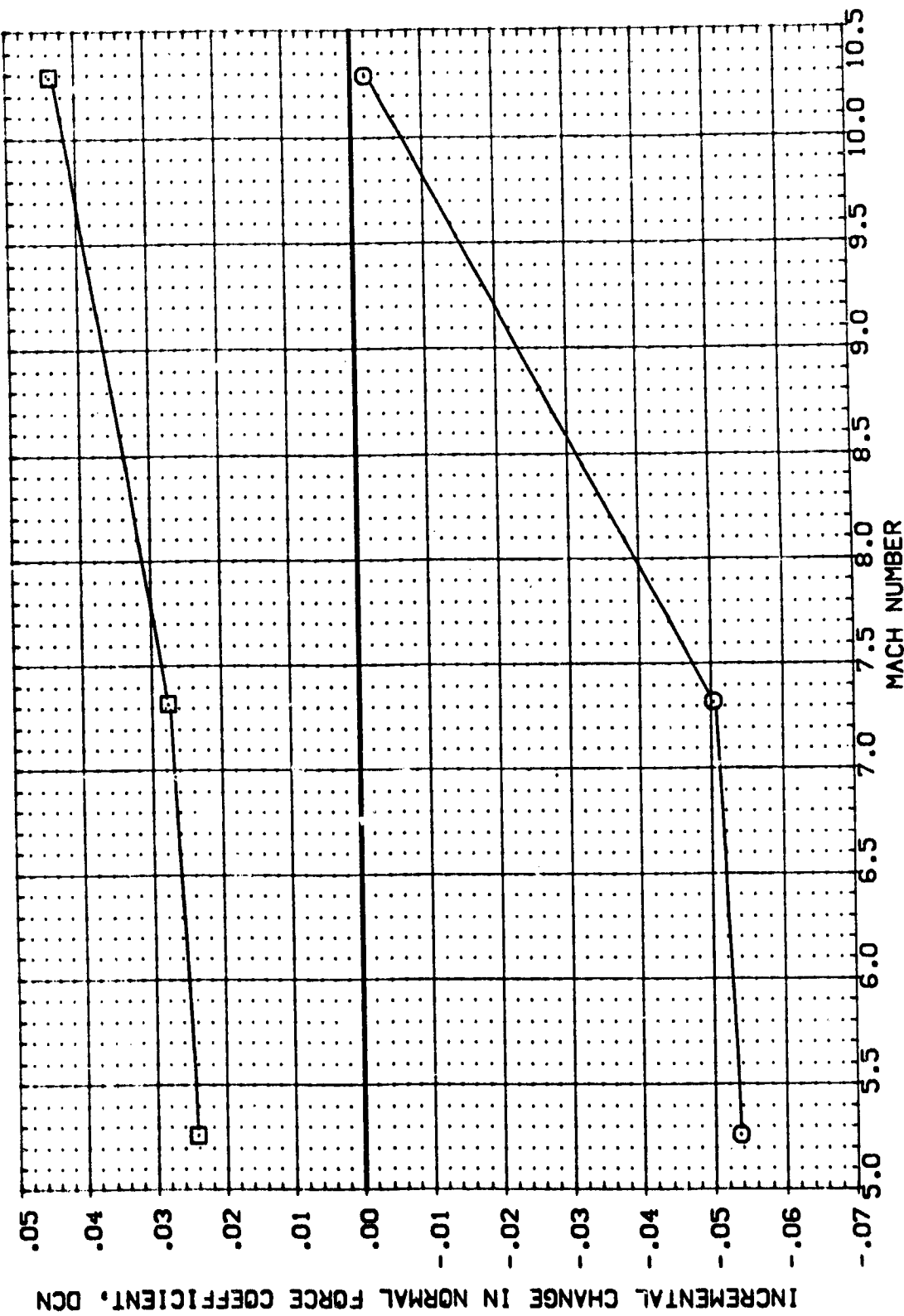


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(C) ALPHA = 35.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELDF	ELEVON	SPOBRK	RUDDER	REFERENCE INFORMATION
(18X047)	AVES 3.5-160 CA11B (B10F4C507K-3B)(V07E18)(V5R5)	-14.250	.000	54.920	.000	SREF 2690.0000
(18X064)	AVES 3.5-160 CA11B (B10F4C507K-3B)(V07E18)(V5R5)	13.750	.000	54.920	.000	LREF 474.8100
						BREF 936.6800
						XMRP 1076.4800
						YMRP .0000
						ZMRP .0000
						SCALE 0150

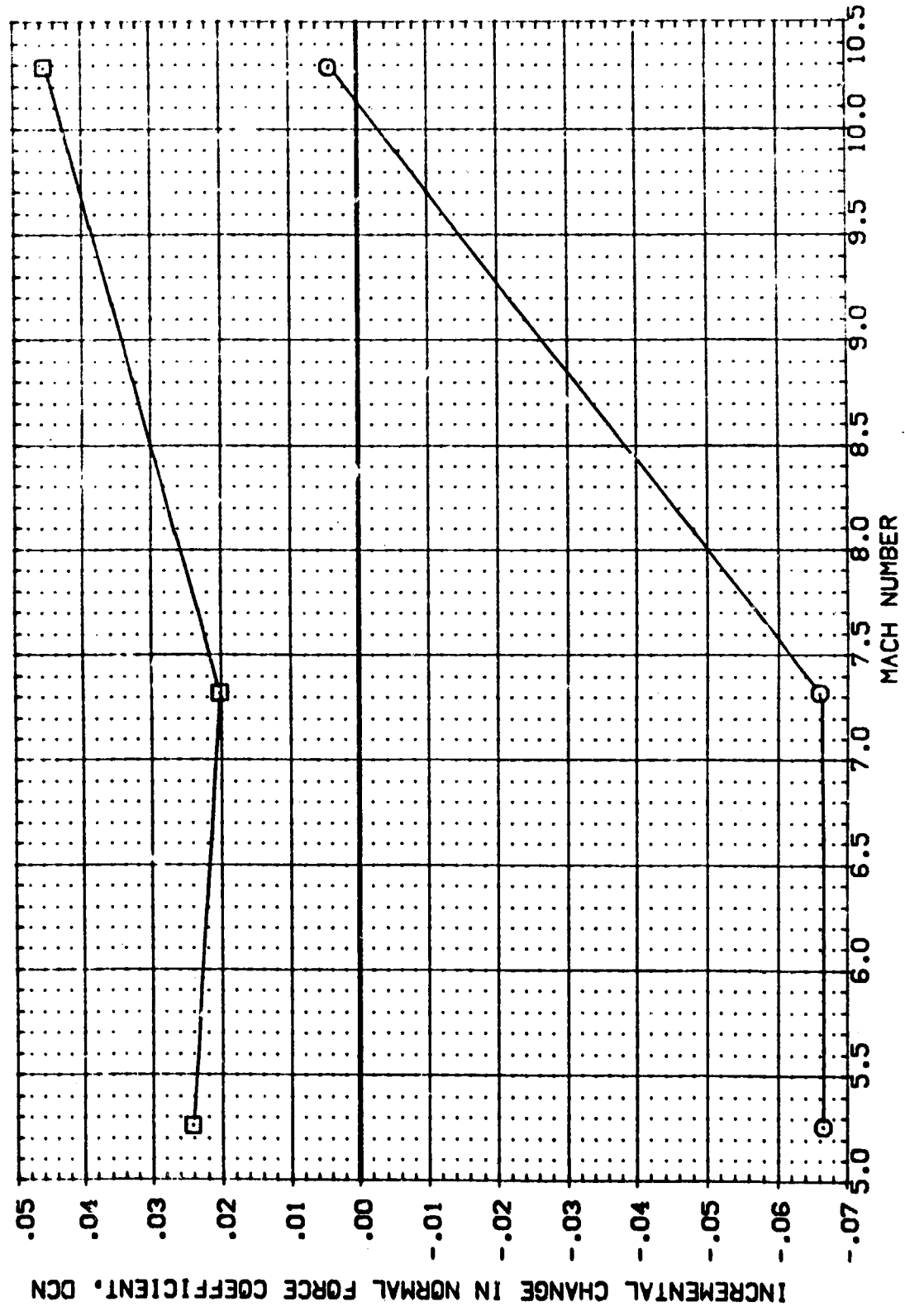


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(D) ALPHA = 40.00



DATA SET SYMBOL: (BX047) (BX064)

CONFIGURATION DESCRIPTION: ARES 3.5-160 CA11B (B10F4CS07G-6)(V87E18)(V5R5) -14.250
 ARES 3.5-160 CA11B (B10F4CS07G-3)(V87E18)(V5R5) 13.750

REFERENCE INFORMATION:

	SREF	LREF	BREF	XREF	YREF	ZREF	SCALE
2650.0000	474.8100	936.6800	1076.4800	0.000	0.000	400.0000	0.150
SQ.FT.	IN.	IN.	IN.	IN.	IN.	IN.	

RUDDER: .000
 SPOON: 54.920
 ELEVON: .000
 M/LBOF: -14.250

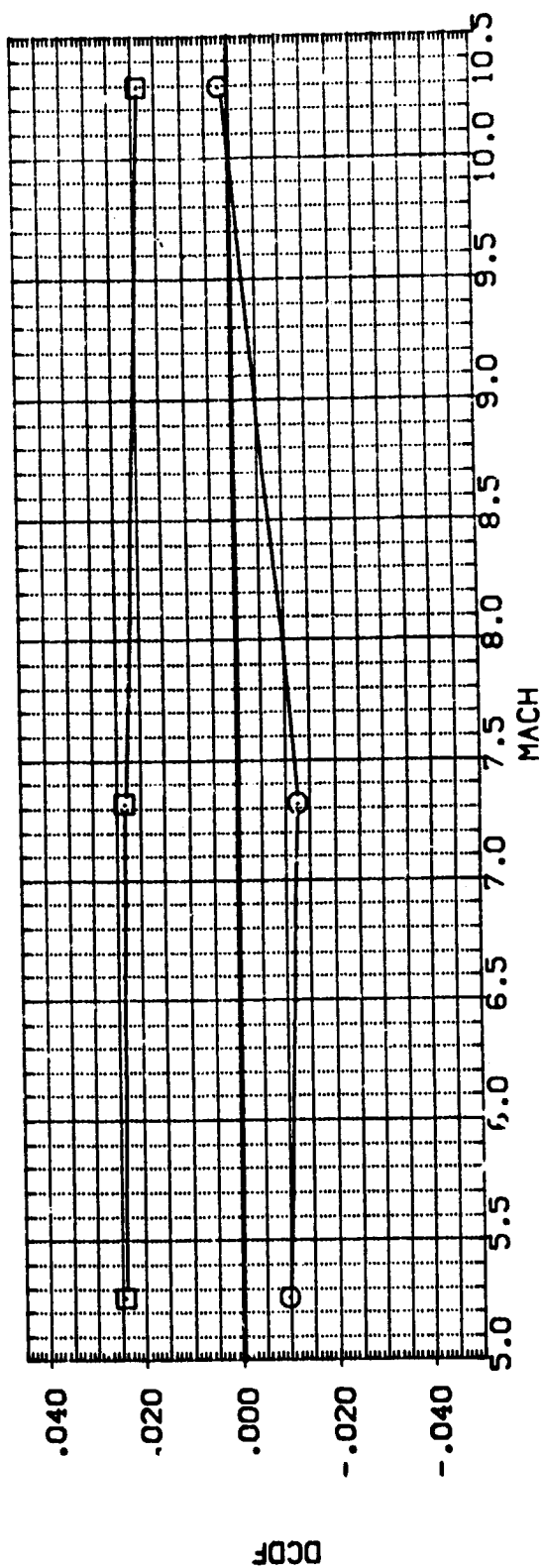
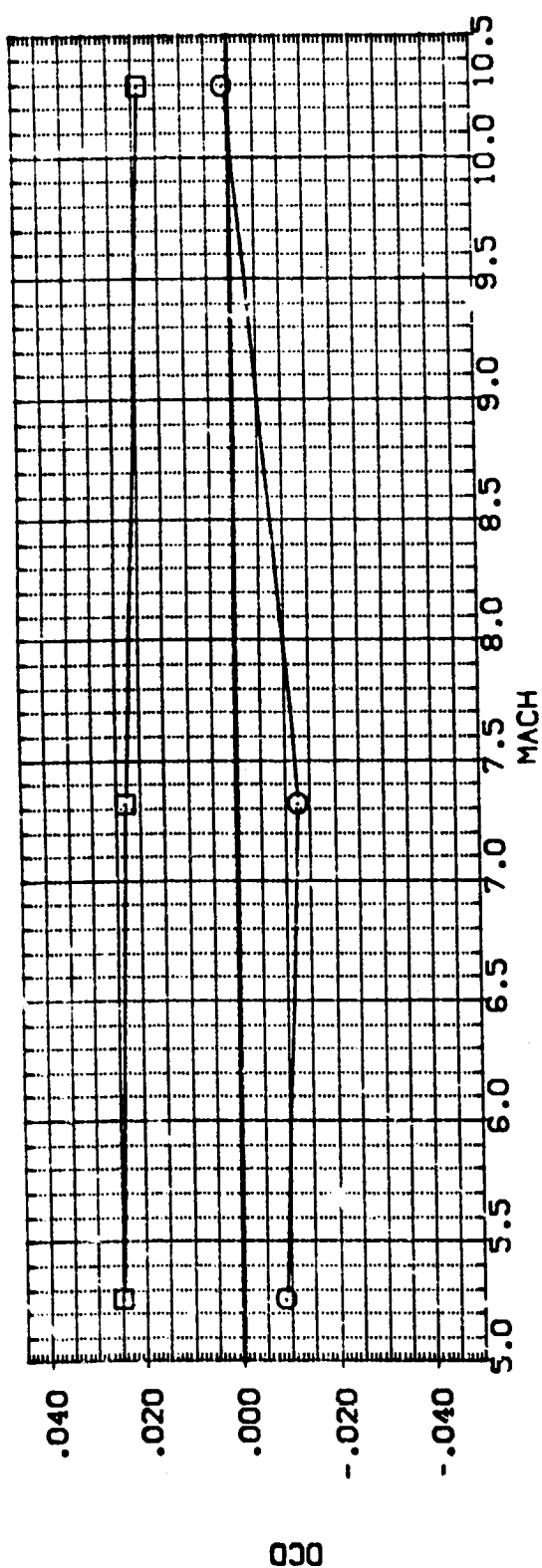


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(A) ALPHA = 25.00

DATA SET SYMBOL: 8
 CONFIGURATION DESCRIPTION: ASES 3.5-160 GA118 (B10F4C507G48) (V87E18) (V87E18) (V87E18)
 REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. 50.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XPRP 1076.4800 IN.
 YPRP 0.0000 IN.
 ZPRP 400.0000 IN.
 SCALE 0.150

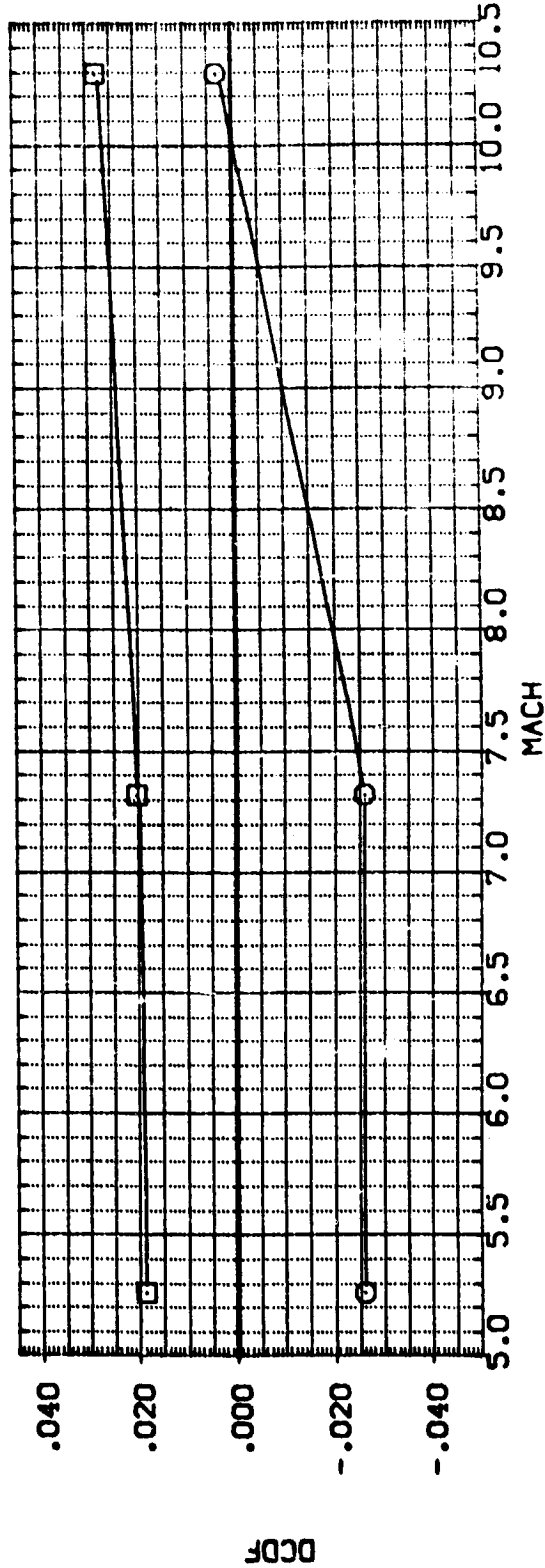
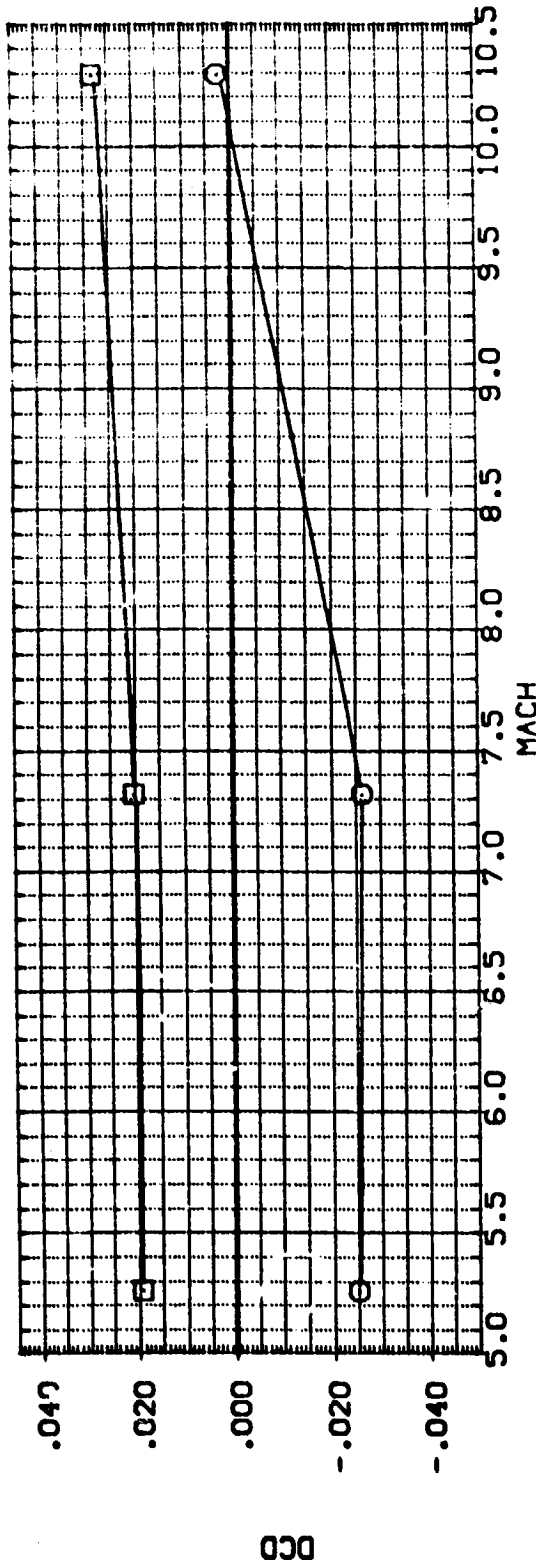


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(B) ALPHA = 30.00



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DELBOF	ELEVON	SPDRBK	RUDDER	REFERENCE INFORMATION	
(1BX047)	AMES 3.5-160 OA11B (B10F4CS07K3N8)(V87E18)(V5K5)	-14.250	.000	54.920	.000	SREF	2650.0000 SQ.FT.
(1BX064)	AMES 3.5-160 OA11B (B10F4CS07K3N8)(V87E18)(V5K5)	13.750	.000	54.920	.000	LREF	474.6100 IN.
						BREF	936.6800 IN.
						XMRP	1076.4800 IN.
						YMRP	.0000 IN.
						ZMRP	400.0000 IN.
						SCALE	.0150

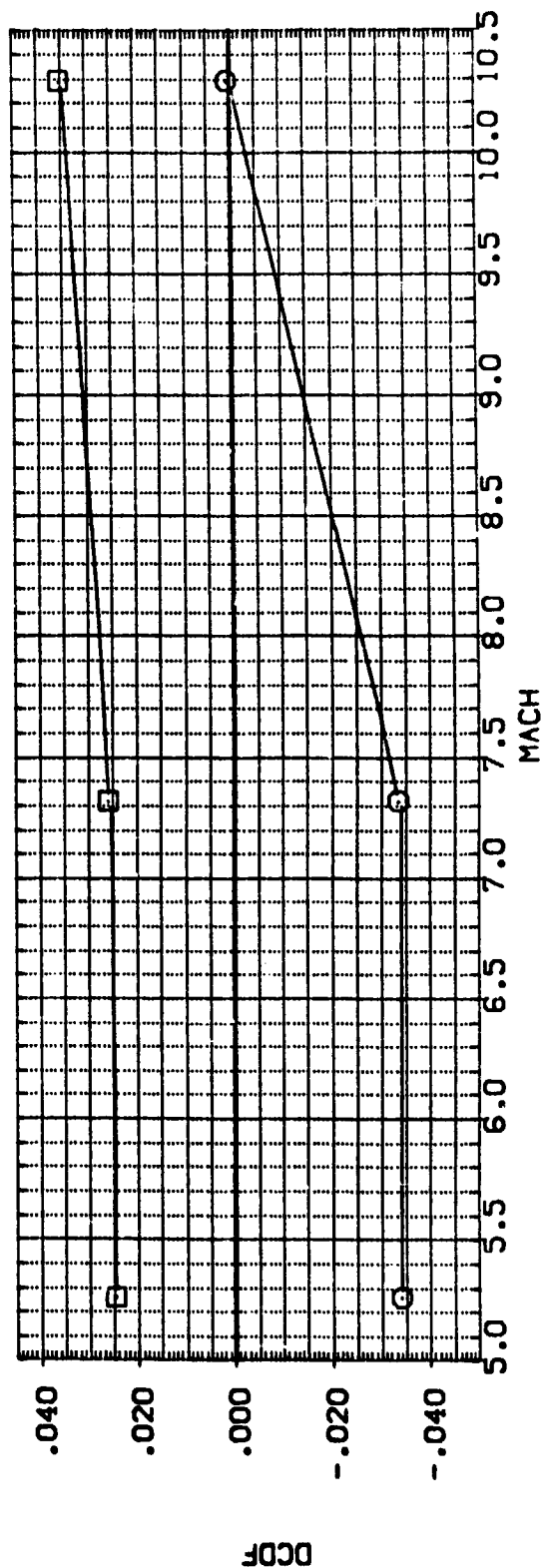
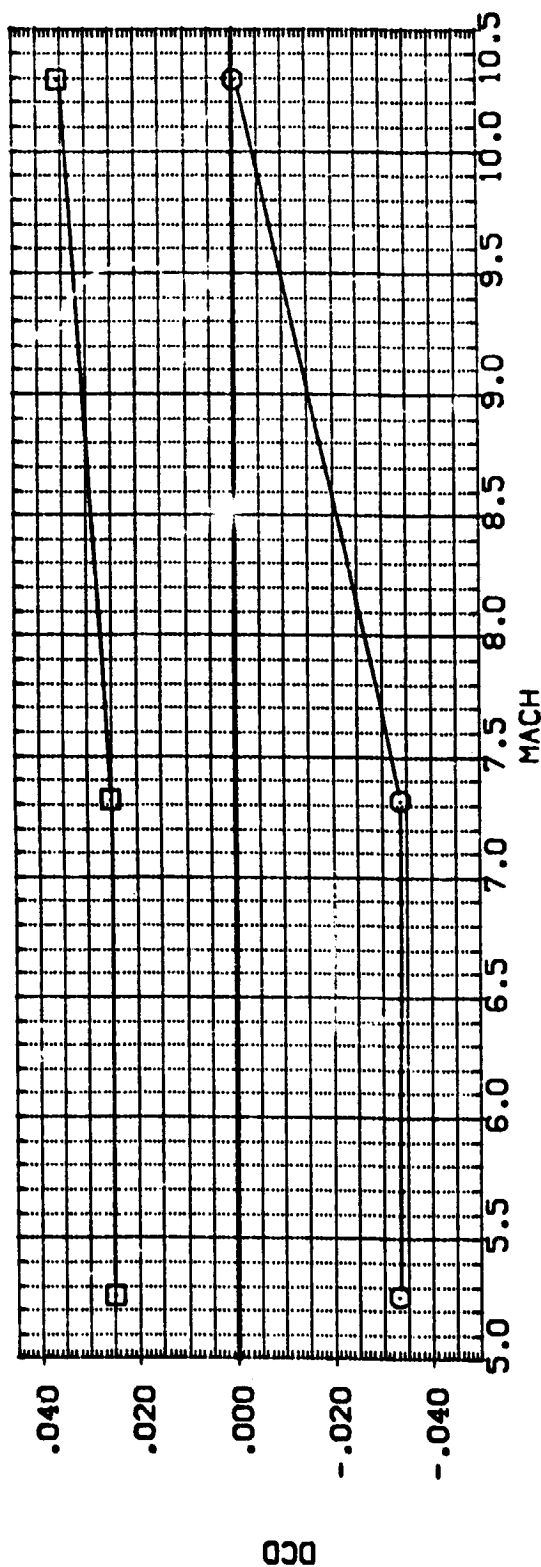


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(C)ALPHA = 35.00

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(180047)
(180054)

AVES 3.5-160 OA118 (810F4C507M3N8)(W87E18)(V5RS)
AVES 3.5-160 OA118 (810F4C507M3N8)(W87E18)(V5RS)

DELBOF
-14.250
13.750

ELEVON
.000
.000

SPD88K
54.920
54.920

RUDDER
.000
.000

REFERENCE INFORMATION
SREF 2690.0000 50.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP 0.000 IN.
ZMRP 400.0000 IN.
SCALE .0150

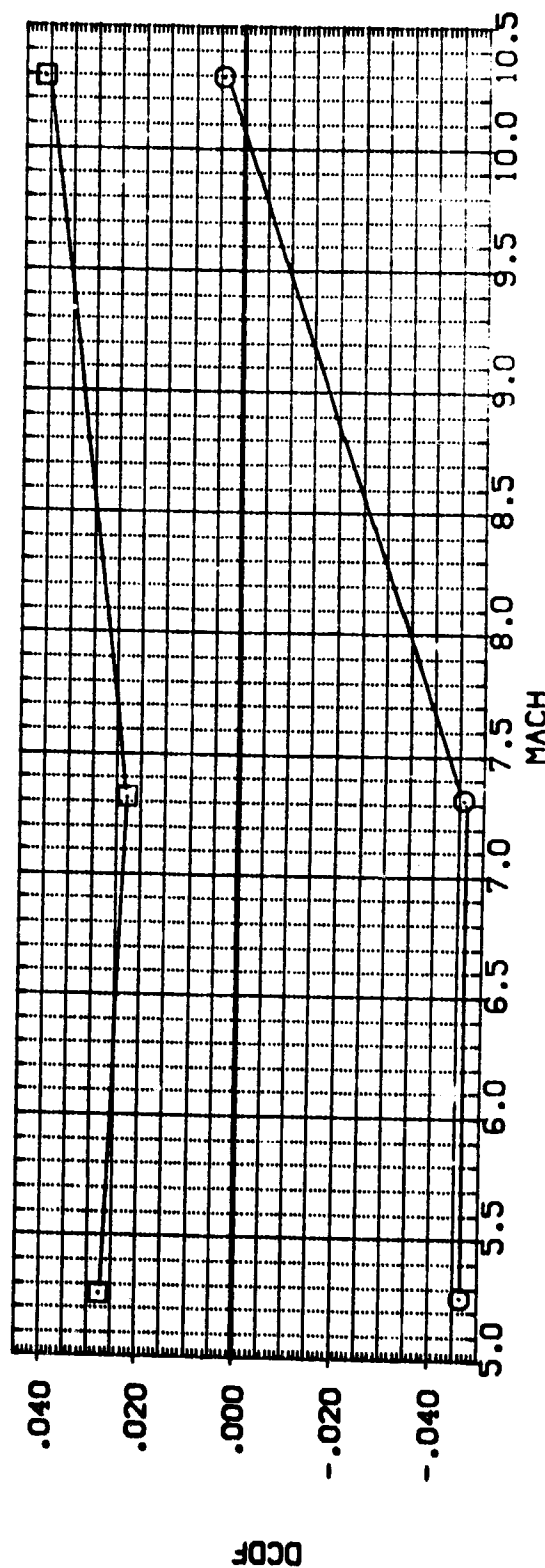
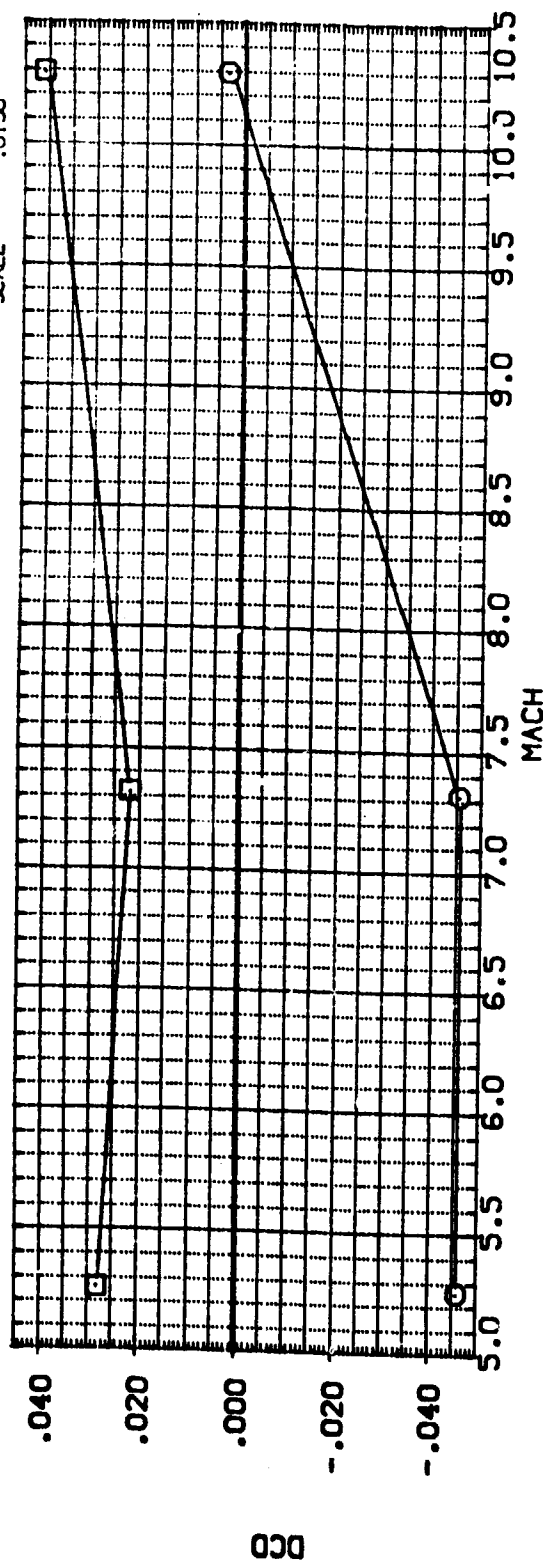


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(C)ALPHA = 40.00

DATA SET SYMBOL: (18X047) (18X054) CON: 5-160 DA: 118 (81D'4C5D7C3-8) (VARS) -14.750 DELBO: ELEVON: SPOBRK: RUDDER: REFERENCE INFORMATION: SREF: 2690.0000 50.FT. LREF: 474.8100 IN. BREF: 936.6800 IN. XMRP: 1076.4800 IN. YMRP: .0000 IN. ZMRP: 400.0000 IN. SCALE: .0150

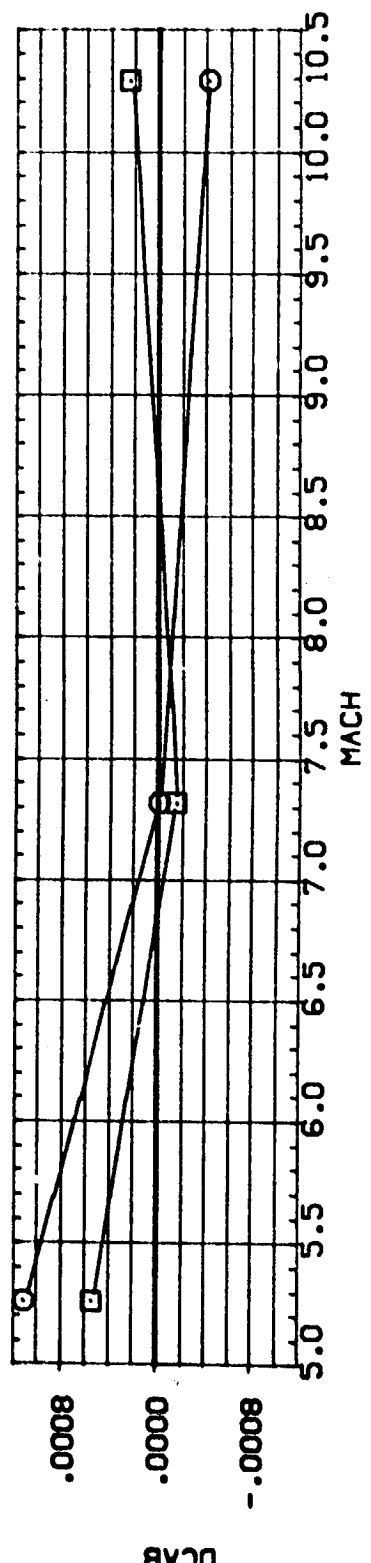
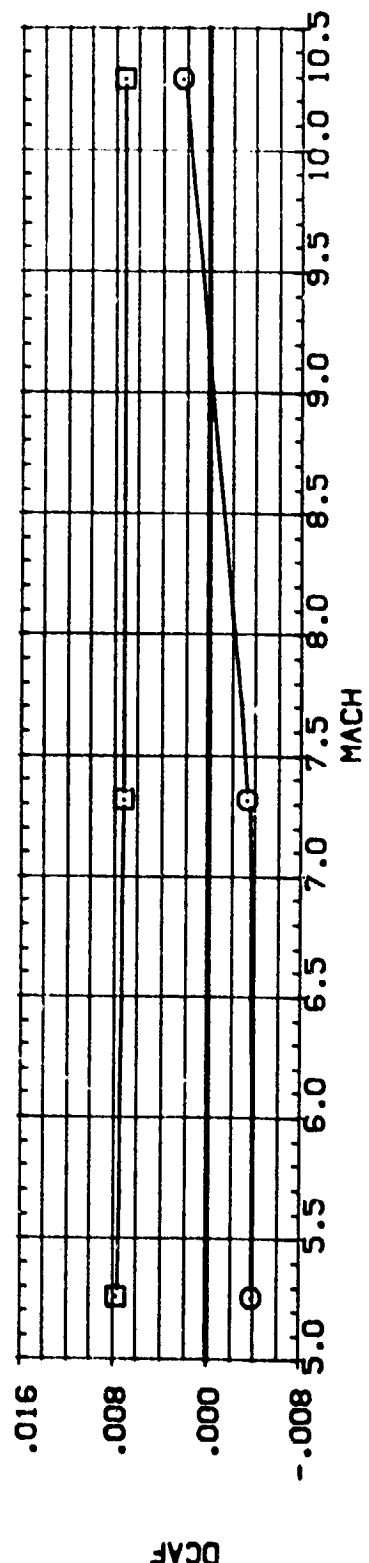
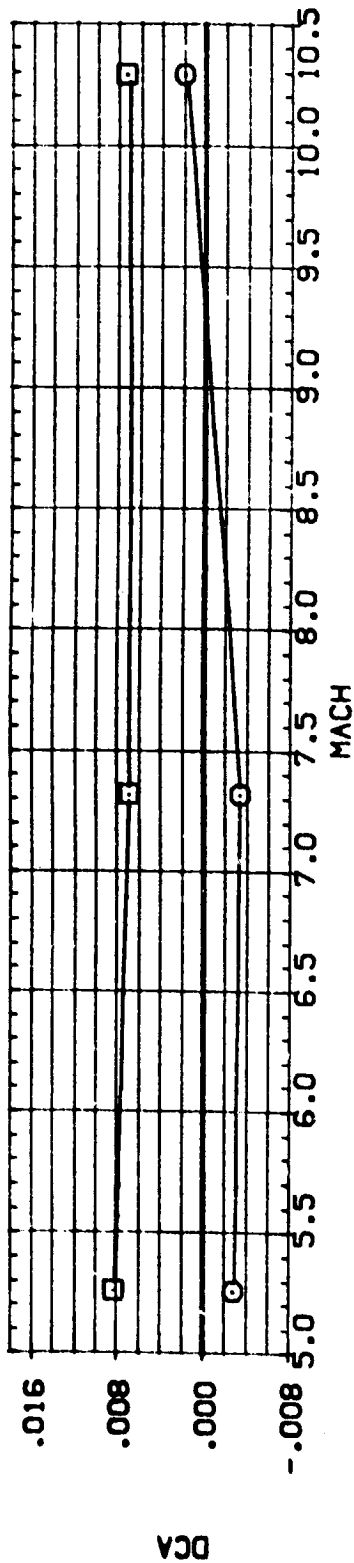



FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(A) ALPHA = 25.00

DATA SET SYMBOL: (180047) (180064)  CONFIGURATION DESCRIPTION: AHES 3.5-160 DA118 (810F4C307G48)(W87E18)(V595) -14.250 13.750 DELTDF ELEVON SPOONK RUDDER REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8100 IN. BREF 936.6800 IN. XMRP 1076.4800 IN. YMRP 400.0000 IN. ZMRP 400.0000 IN. SCALE .0150

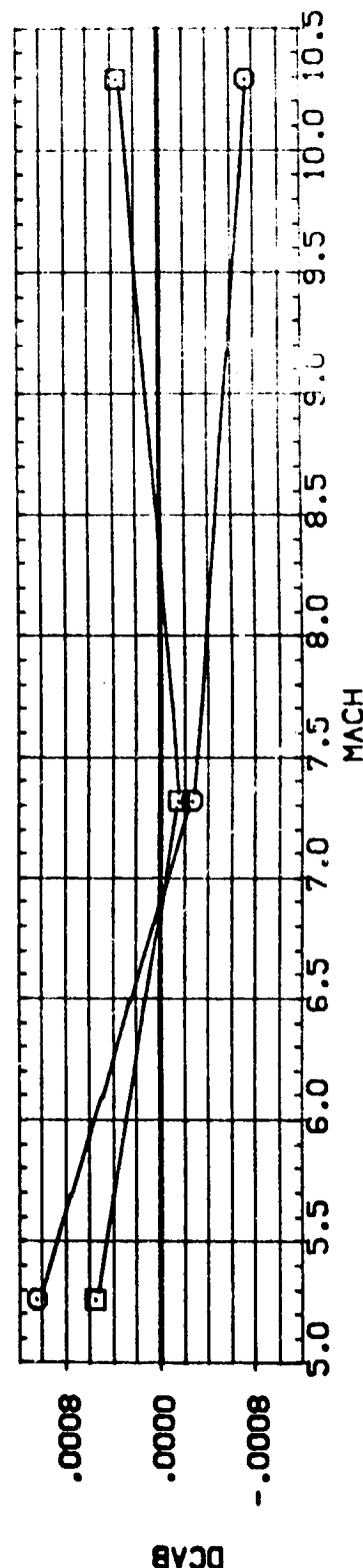
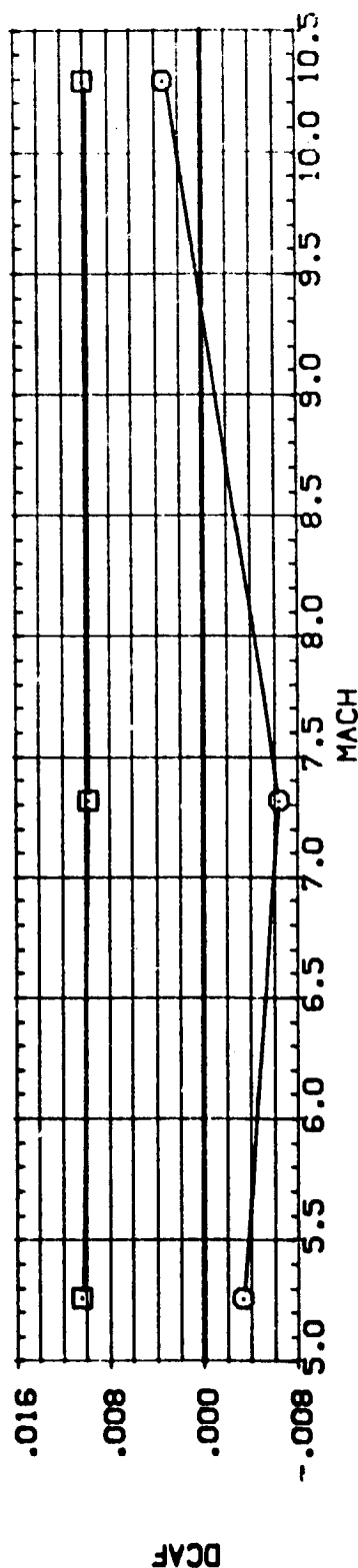
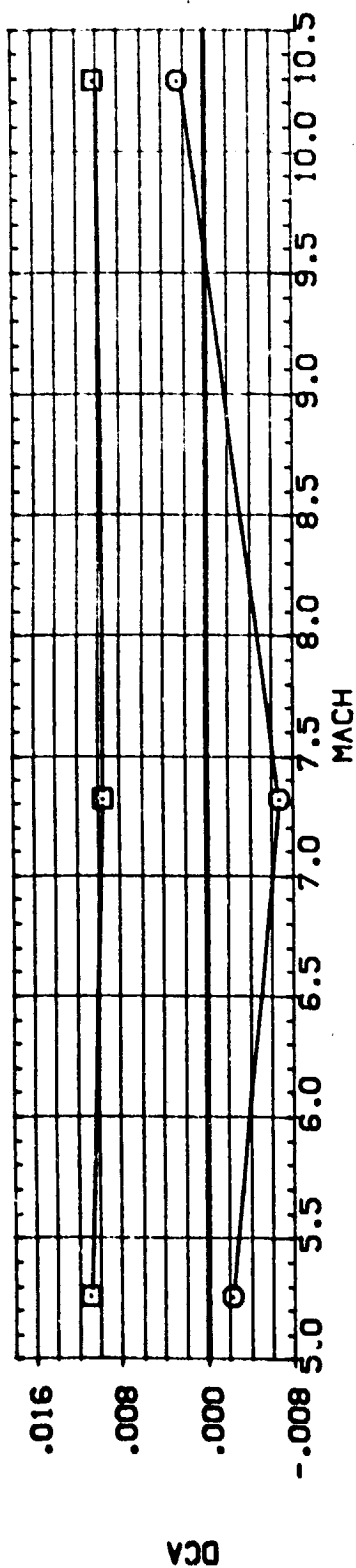


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(B) ALPHA = 30.00



DATA SET SYMBOL: (180047) (180064) ☐ ☐

CONFIGURATION DESCRIPTION:
 AYES 3.5-160 DA11B (B10F4C507G3B)(V87E18)(V87E18)
 AYES 3.5-160 DA11B (B10F4C507G3B)(V87E18)(V87E18)

DELBOF: -14.250
 ELEVON: .000
 SPDRNK: 54.520
 RUDDER: .000

REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XPRP: 1076.4800 IN.
 YPRP: 400.0000 IN.
 ZPRP: 400.0000 IN.
 SCALE: .0150

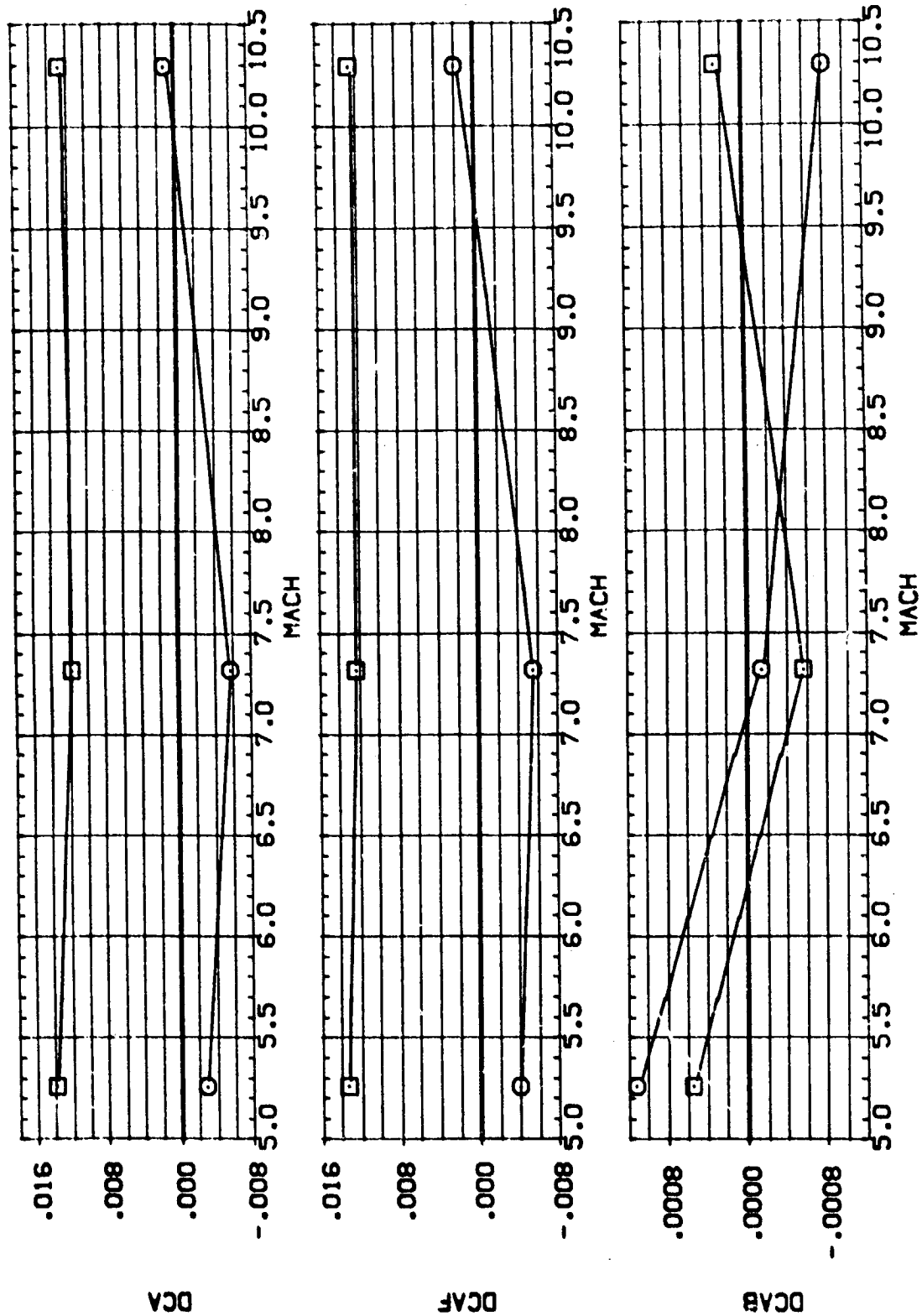


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(C)ALPHA = 35.00

DATA SET SYMBOL: (180017) (180064) CONFIGURATION DESCRIPTION: AYES 3.5-180 0A118 (810F4C5070G08)(V07E18)(V07E18) DELTA OF: -14.250 (180064) AYES 3.5-180 0A118 (810F4C5070G08)(V07E18)(V07E18) REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8100 IN. BREF 936.6800 IN. XPRP 1076.4800 IN. YPRP 100.0000 IN. ZPRP 100.0000 IN. SCALE .0150

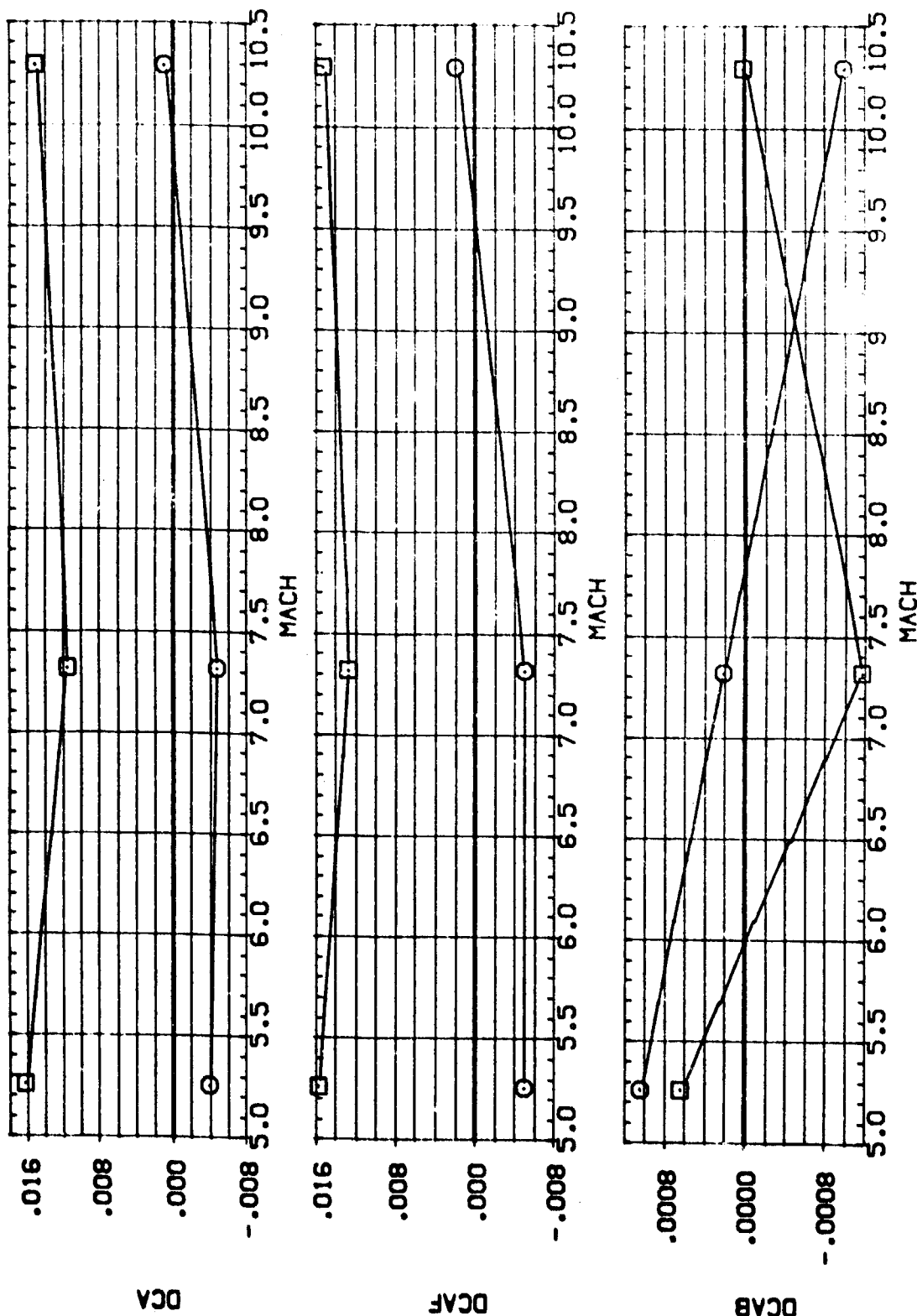


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER
(α) $\alpha = 40.00$



DATA SET SYMBOL: (18X047) (18X054) (18X054)

CONFIGURATION DESCRIPTION: ARES 3.5-160 CALIB (BIDF4C507X348)(V595) ARES 3.5-160 CALIB (BIDF4C507X348)(V595)

DELTA OF: -14.250 13.750

ELEVON: .000 .000

SPD BRK: 54.920 54.920

RUDER: .000 .000

REFERENCE INFORMATION: SREF 2690.0000 SQ.FT. LREF 474.8100 IN. BREF 936.6800 IN. XTRP 1076.4800 IN. YTRP .0000 IN. ZTRP 400.0000 IN. SCALE .0150

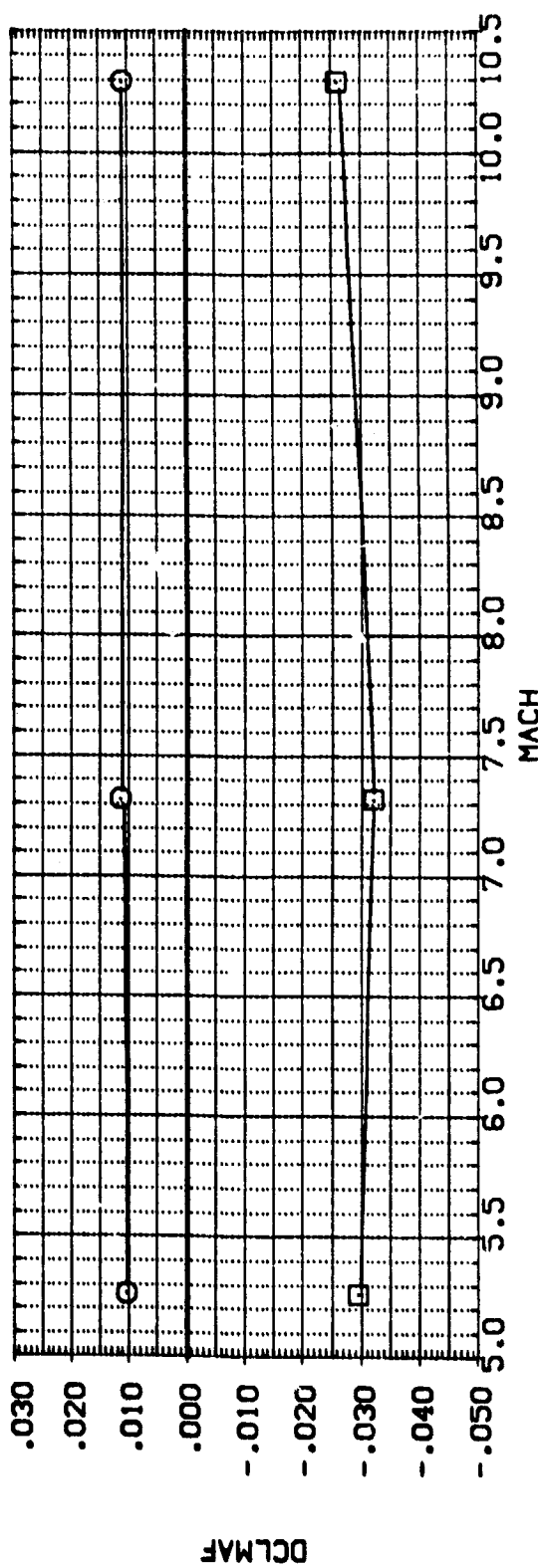
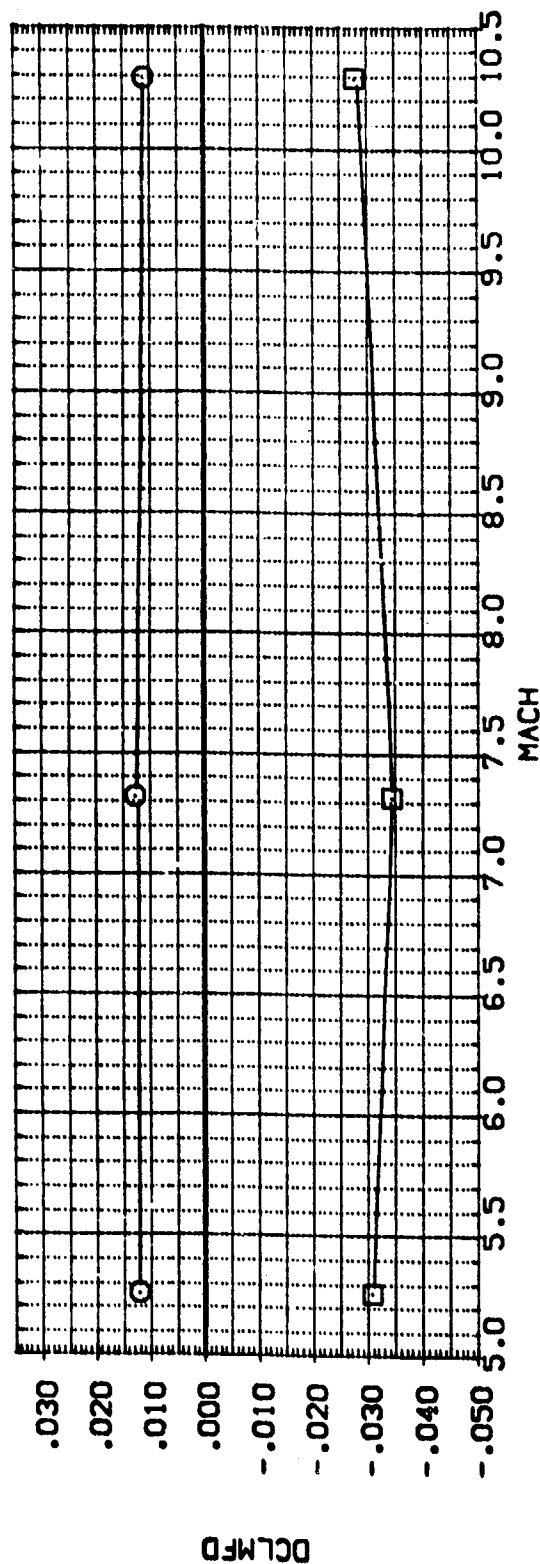


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(A) ALPHA = 25.00

DATA SET SYMBOL: (180047) (180054) □

CONFIGURATION DESCRIPTION: ARES 3.5-160 0A118 (B10F4C507G4B)(V67E18)(V59S) -14.250
 ARES 3.5-160 0A118 (B10F4C507G4B)(V67E18)(V59S) 13.750

DELBOF: 14.250 13.750

ELEVON: .000 .000

SPOBRK: 54.520 54.520

RUDDER: .000 .000

REFERENCE INFORMATION:

SREF	2650.000	50.000
LREF	474.8100	IN.
BREF	936.6800	IN.
XPRP	1076.4800	IN.
YPRP	.0000	IN.
ZPRP	400.0000	IN.
SCALE	.0150	

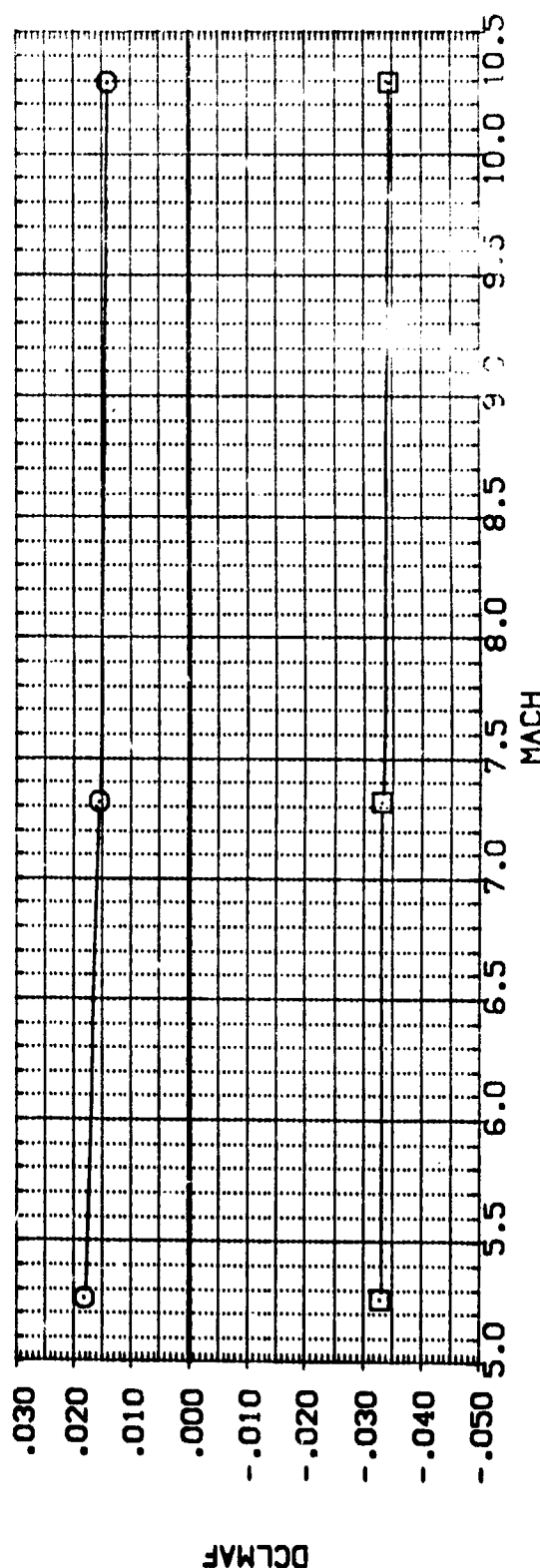
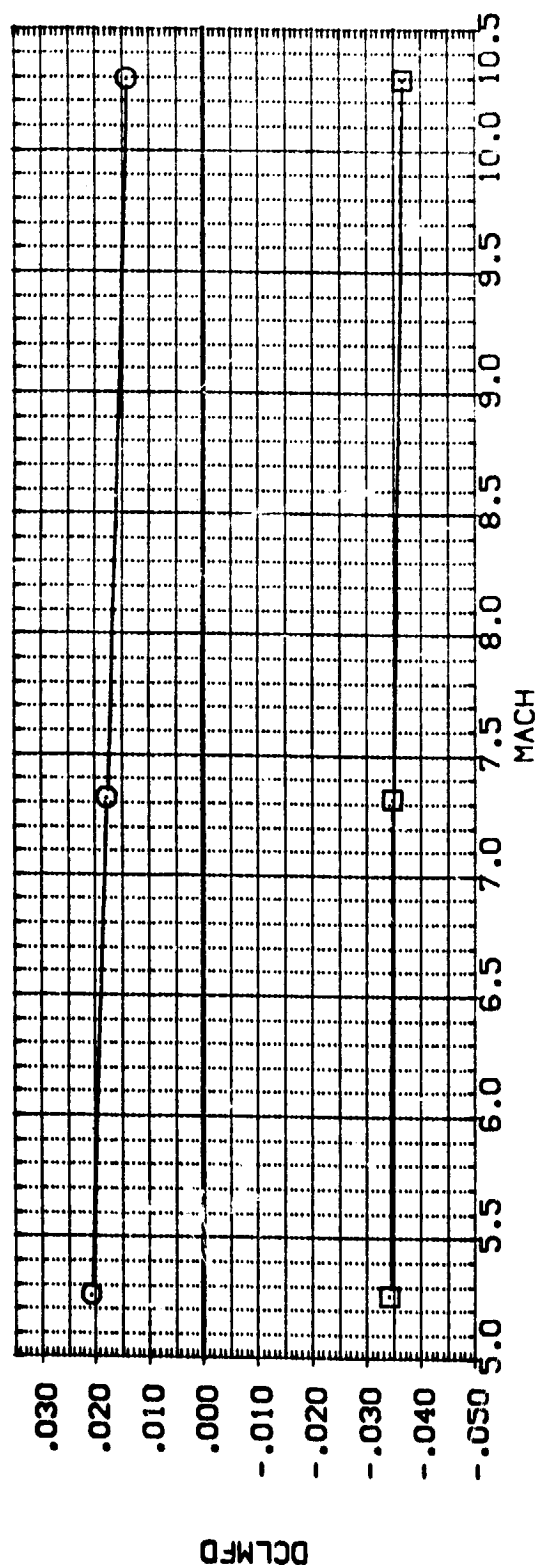



FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(B) ALPHA = 30.00

DATA SET SYMBOL: (180047) (180054)  CO-FIGURATION DESCRIPTION: AYES 3.5-160 OA11B (B10F4C507K3V8)(V87E18)(V5R5) AYES 3.5-160 OA11B (B10F4C507K3V8)(V87E18)(V5R5) DELBOF: -14.250 13.750 ELEVON: .000 .000 SPOBRK: 54.920 54.920 RUDDER: .000 .000 REFERENCE INFORMATION: SREF 2690.0000 50.FT. LREF 474.8100 IN. BREF 936.6800 IN. XMRP 1076.4800 IN. YMRP 400.0000 IN. ZMRP .0150 SCALE

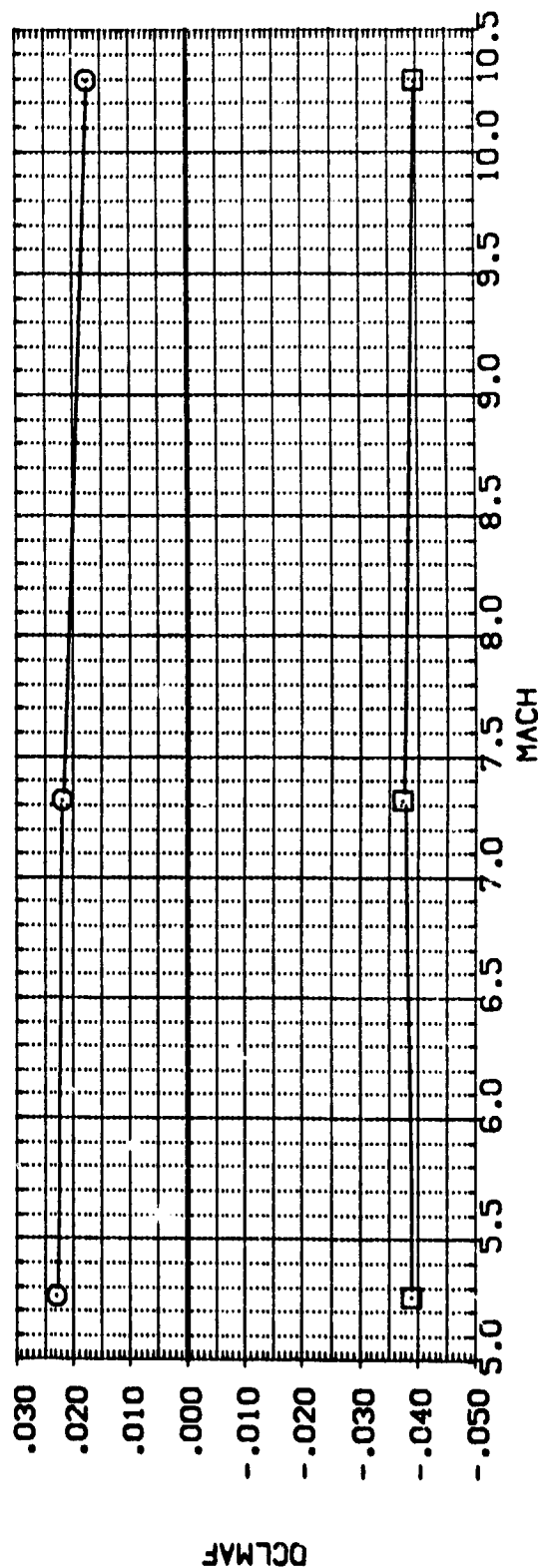
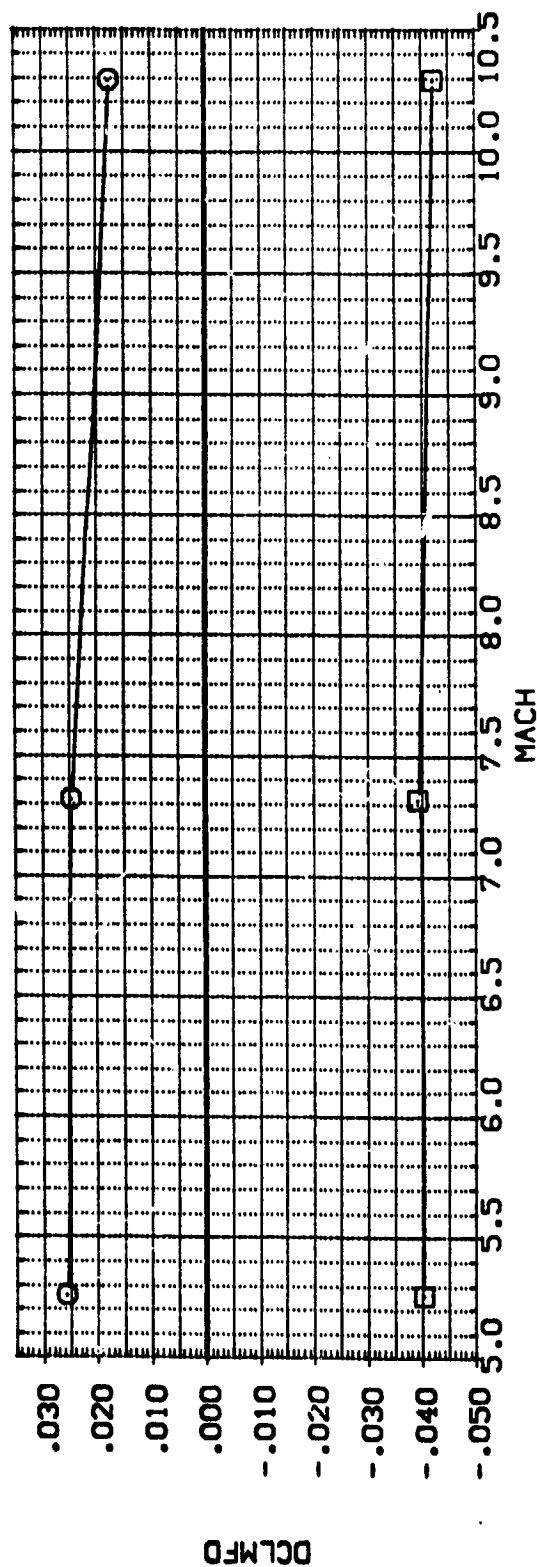


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(C)ALPHA = 35.00

DATA SET SYMBOL: (180047) (180064) ☐ ☐

CONFIGURATION DESCRIPTION:
 ARES 3.5-160 CA118 (810F4C507K3G8)(V87E18)(V5R5)
 ARES 3.5-160 CA118 (810F4C507K3G8)(V87E18)(V5R5)

DELBDP: -14.250
 ELEVON: .000
 SP083K: 54.920
 FLUDER: .000
 REFERENCE INFORMATION:
 SREF: 2690.0000 SQ.FT.
 LREF: 474.8100 IN.
 BREF: 936.6800 IN.
 XMRP: 1076.4800 IN.
 YMRP: .0000 IN.
 ZMRP: 400.0000 IN.
 SCALE: .0150

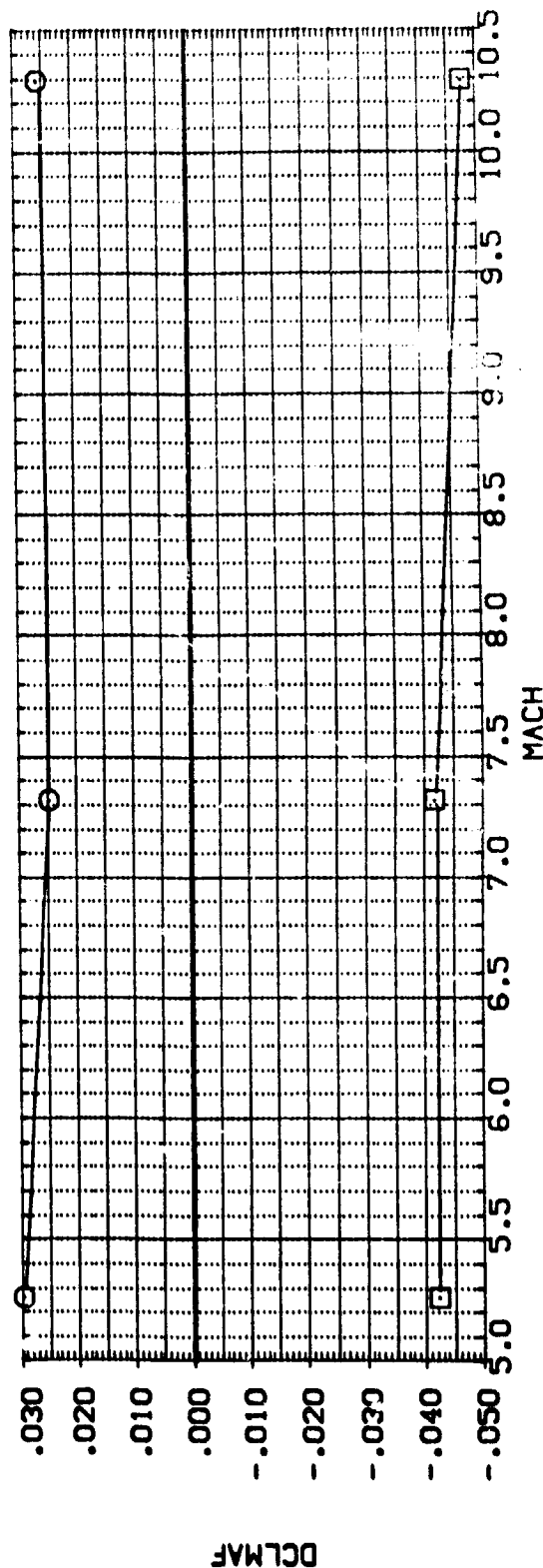
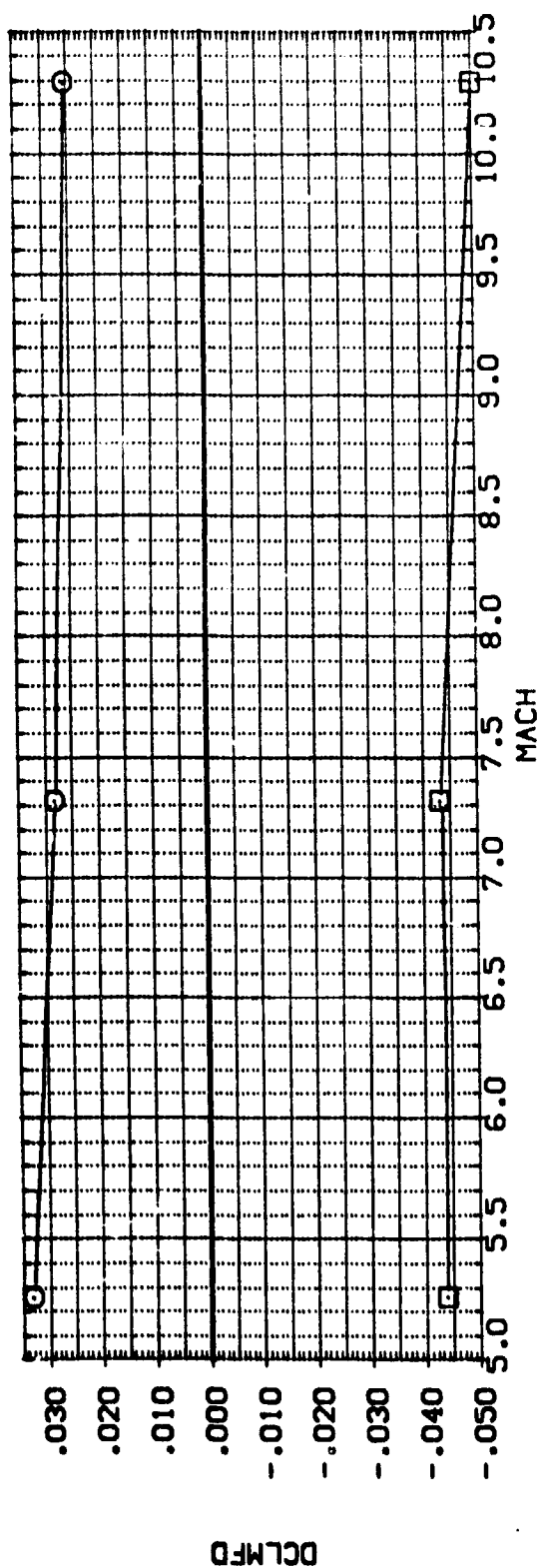


FIG. 4.E INCREMENTAL BODYFLAP EFFECTS WITH MACH NUMBER

(D) ALPHA = 40.00

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	SPOBRK	BDFLAP	BETA	REFERENCE INFORMATION
(DBK07)	AMES 3.5-160 CA11B (B10F4CS07G4B)(V87E18)(V59S)	.000	54.920	-14.250	.000	SREF 2690.0000 50.000
(DBK019)	AMES 3.5-160 CA11B (B10F4CS07G4B)(V87E18)(V59S)	-10.000	54.920	-14.250	.000	LREF 474.8100 IN.
(DBK018)	AMES 3.5-160 CA11B (B10F4CS07G4B)(V87E18)(V59S)	-20.000	54.920	-14.250	.000	BREF 936.8800 IN.
						XREF 1076.4800 IN.
						YREF .0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

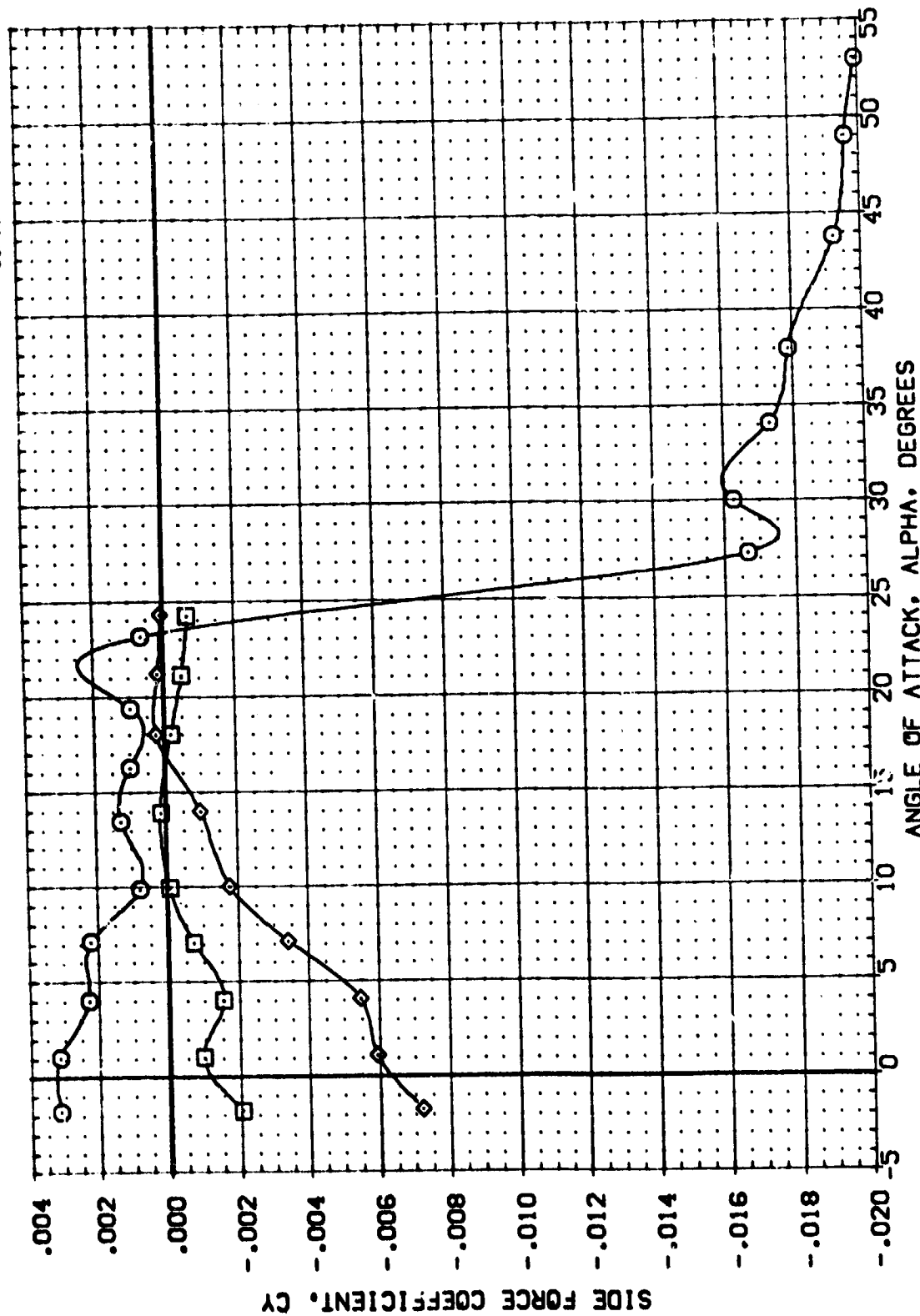


FIG. 5.A EFFECT OF RUDDER DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	SPOILER	BOFLAP	BETA	REFERENCE INFORMATION
{DBK017}	APES 3.5-160 DAI1B (81D4C507H3B) (V87E181(V89S))	.000	SA.920	-14.250	.000	SREF 2650.0000 SQ.FT.
{DBK018}	APES 3.5-160 DAI1B (81D4C507H3B) (V87E181(V89S))	-10.000	SA.920	-14.250	.000	LREF 474.8100 IN.
		-20.000	SA.920	-14.250	.000	BREF 536.8800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP .0000 IN.
						SCALE .0150

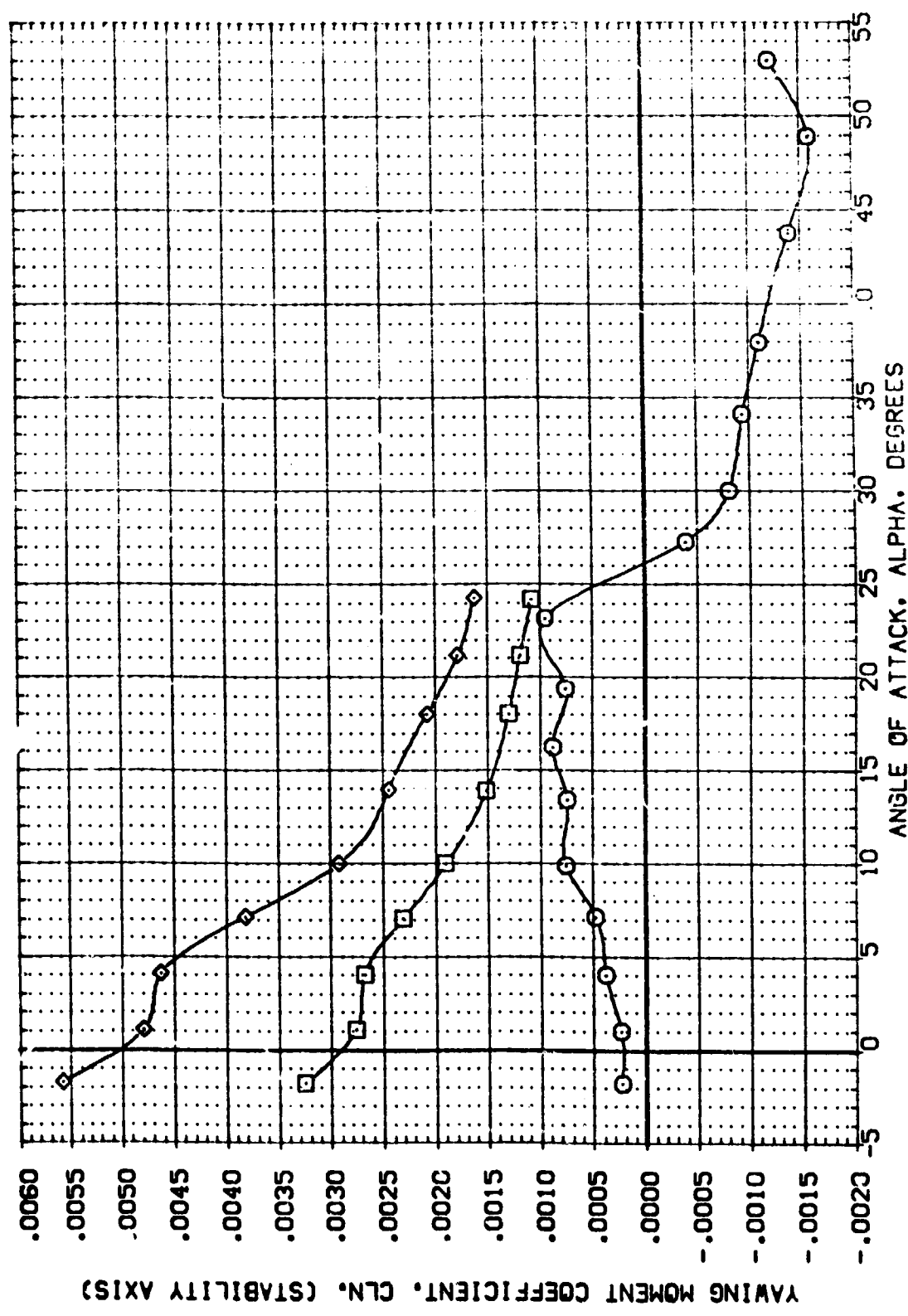


FIG. 5.A EFFECT OF RUDDER DEFLECTION

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALCZER	SPDRK	BOFLAP	BETA	REFERENCE INFORMATION
(DBX07)	AKES 3.5-160 CA118 (B10F4C507K3N8)(V87E18)(V5R5)	.000	54.920	-14.250	.000	SREF 2690.0000 SO.FT.
(DBX019)	AKES 3.5-160 CA118 (B10F4C507K3N8)(V87E18)(V5R5)	-10.000	54.920	-14.250	.000	LREF 474.8100 IN.
(DBX018)	AKES 3.5-160 CA118 (B10F4C507K3N8)(V87E18)(V5R5)	-20.000	54.920	-14.250	.000	BREF 936.6800 IN.
						ACREF 1076.4600 IN.
						YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

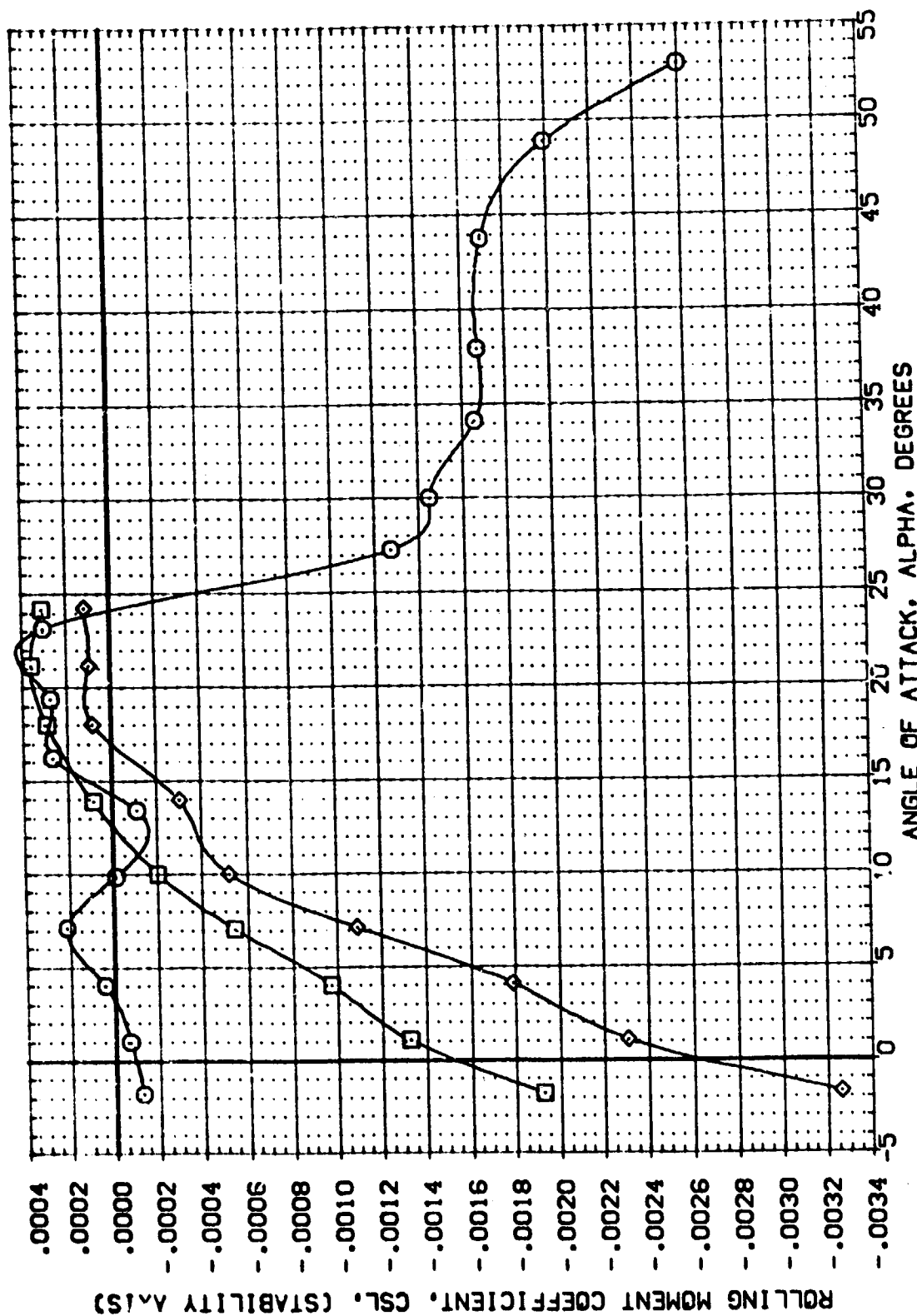


FIG. 5.A EFFECT OF RUDDER DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		SPDRX		BOFLAP		DELRLD		REFERENCE INFORMATION	
(G80019)	AVES 3.5-160	CA11B	(B10F4C507Q48)(V87E18)(V59S)	.000	54.820	-14.250	-10.000	SREF	2690.0000	SO.FT.			
(G80018)	AVES 3.5-160	CA11B	(B10F4C507Q48)(V87E18)(V59S)	.000	54.820	-14.250	-20.000	LREF	474.8100	IN.			
								SREF	936.8800	IN.			
								XMRP	1076.4800	IN.			
								YMRP	.0000	IN.			
								ZMRP	400.0000	IN.			
								SCALE	.0150				

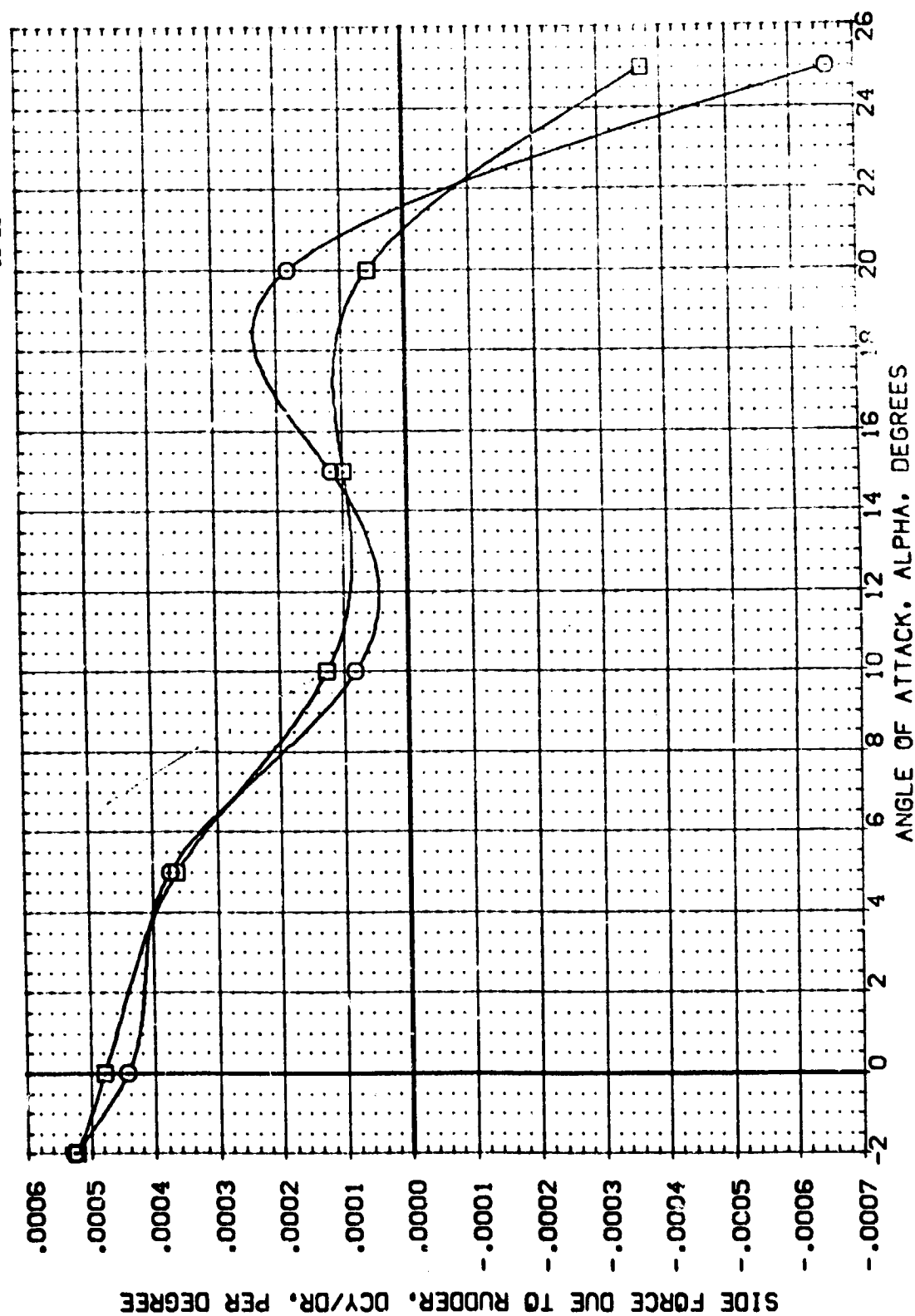


FIG. 5.8 DERIVATIVE EFFECTS OF RUDDER CONTROL

(A)MACH = 7.32



DATA SET SYMBOL: (G8X019) (G8X018)

CONFIGURATION DESCRIPTION: A4ES 3.5-160 CA11B (B10F4C507K48)(V87E18)(V58S) A4ES 3.5-160 CA11B (B10F4C507K48)(V87E18)(V58S)

ELEVON: .000 .000

SPOILER: 54.520 54.520

BOFLAP: -14.250 -14.250

DELRLD: -10.000 -20.000

REFERENCE INFORMATION:

	2690.0000	50.000
SREF	474.8100	IN.
LREF	936.6800	IN.
BREF	1076.4800	IN.
YPRP	400.0000	IN.
ZPRP	400.0000	IN.
SCALE	.0150	

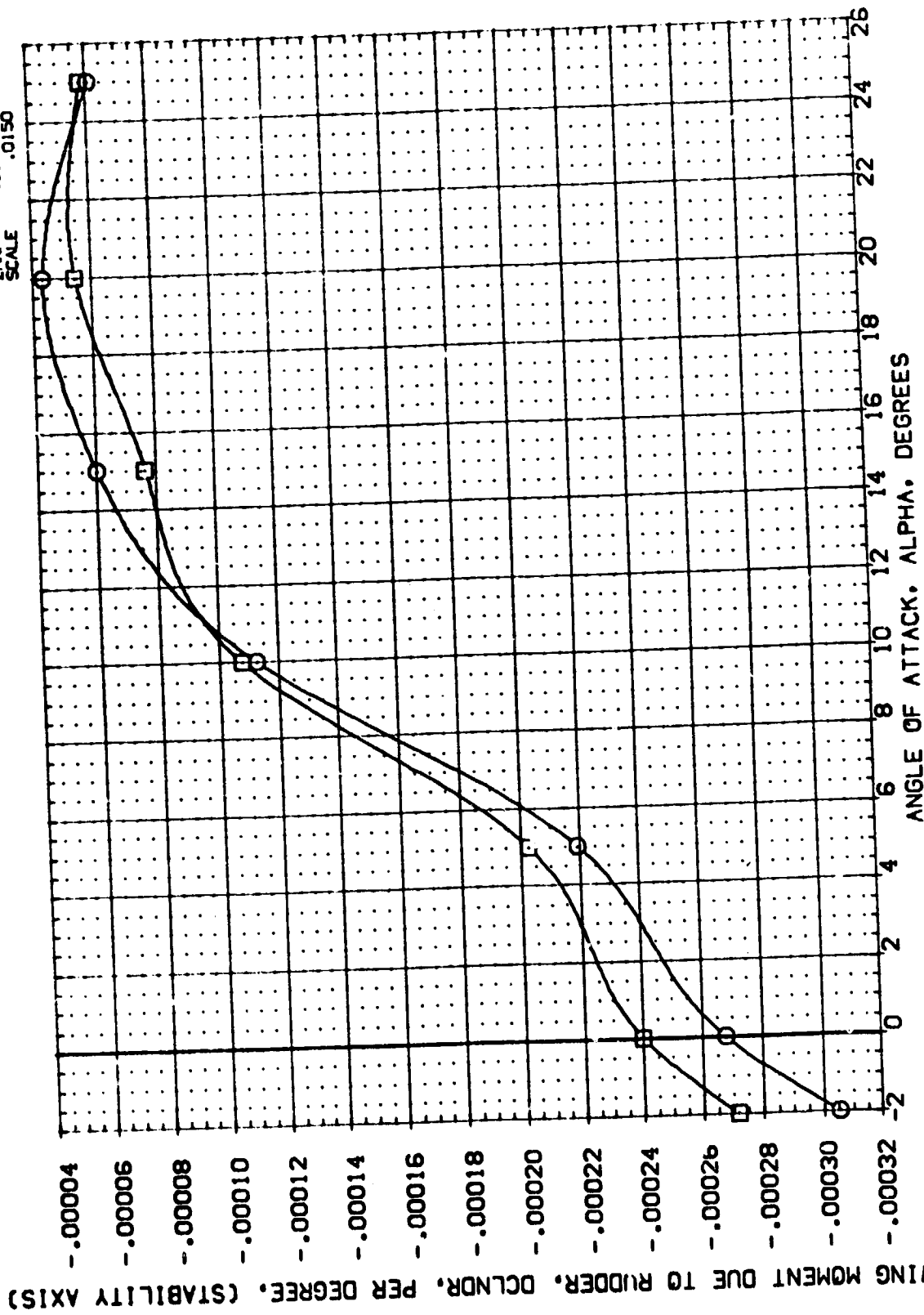


FIG. 5.8 DERIVATIVE EFFECTS OF RUDDER CONTROL

(A)MACH = 7.32

DATA SET SYMBOL: (28X019) (28X018) CONFIGURATION DESCRIPTION: AYES 3.5-160 DA118 (810F4C507H3-8) (V8/E18) (V5R5) AYES 3.5-160 DA118 (810F4C507H3-8) (V87E18) (V5R5) ELEVON: .000 .000 SPOBRK: 54.920 54.920 BOFLAP: -14.250 -14.250 DCLRLD: -10.000 -20.000 REFERENCE INFORMATION: SREF: 2690.0000 SQ.FT. LREF: 474.8100 IN. BREF: 936.6800 IN. XMRP: 1076.4800 IN. YMRP: .0000 IN. ZMRP: 400.0000 IN. SCALE: .0150

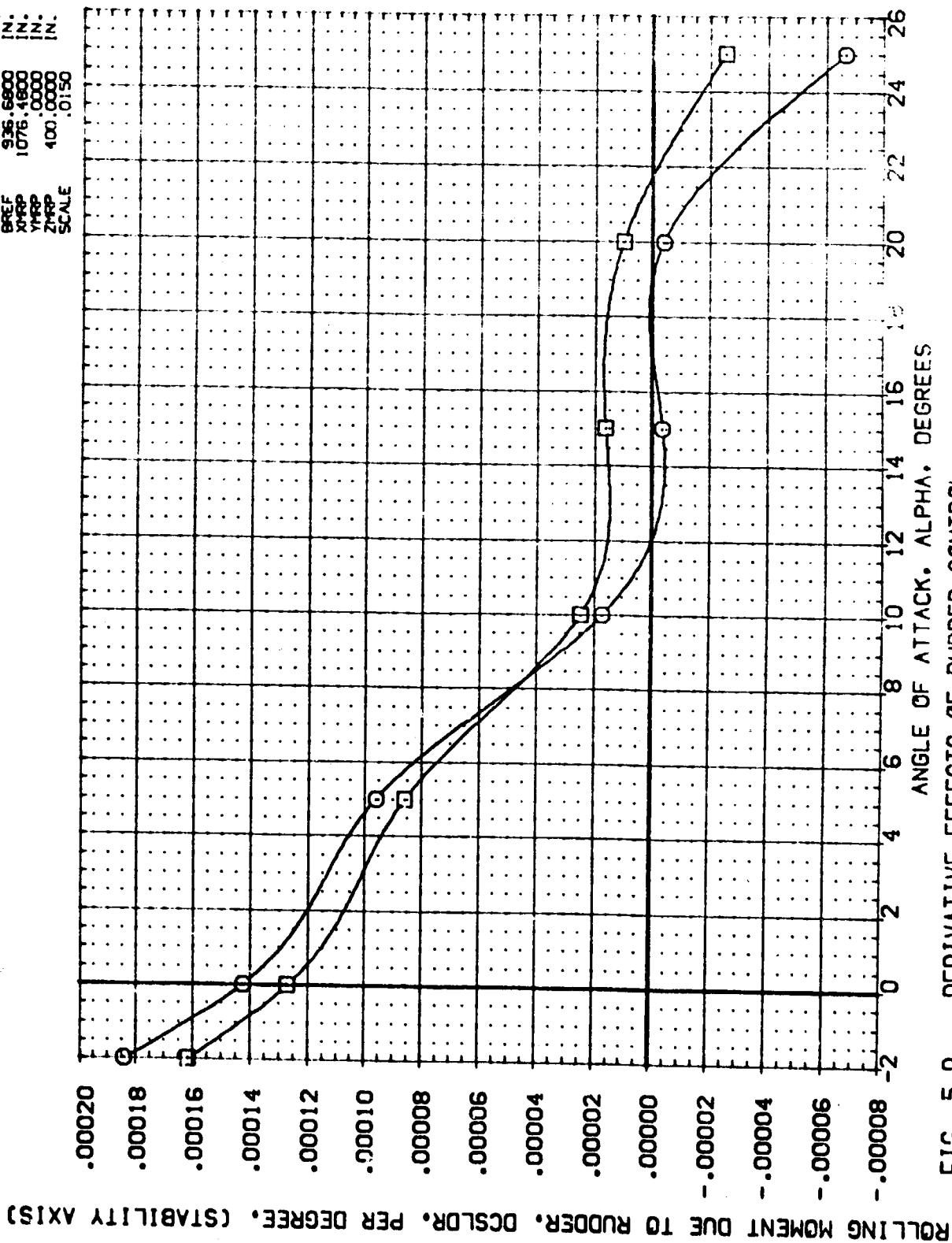


FIG. 5.8 DERIVATIVE EFFECTS OF RUDDER CONTROL

(A) MACH = 7.32

DATA SET SYMBOL: (CBX020) (CBX021) (CBX019)

CONFIGURATION DESCRIPTION: AVE 3.5-160 DAI 18 (B10F4C507H3-48) (V87E 18) (V59S) AVE 3.5-160 DAI 18 (B10F4C507H3-48) (V87E 18) (V59S) AVE 3.5-160 DAI 18 (B10F4C507H3-48) (V87E 18) (V59S)

ELEVON RUDDER SPEEDBRAKES SOFLAP: .000 -10.000 .000 -14.250 .000 -10.000 24.920 54.920 .000 -14.250

REFERENCE INFORMATION: SREF 2650.0000 SQ. FT. LREF 474.8100 IN. BREF 936.6800 IN. XTRP 1076.1800 IN. YTRP .0000 IN. ZTRP 400.0000 IN. SCALE .0150

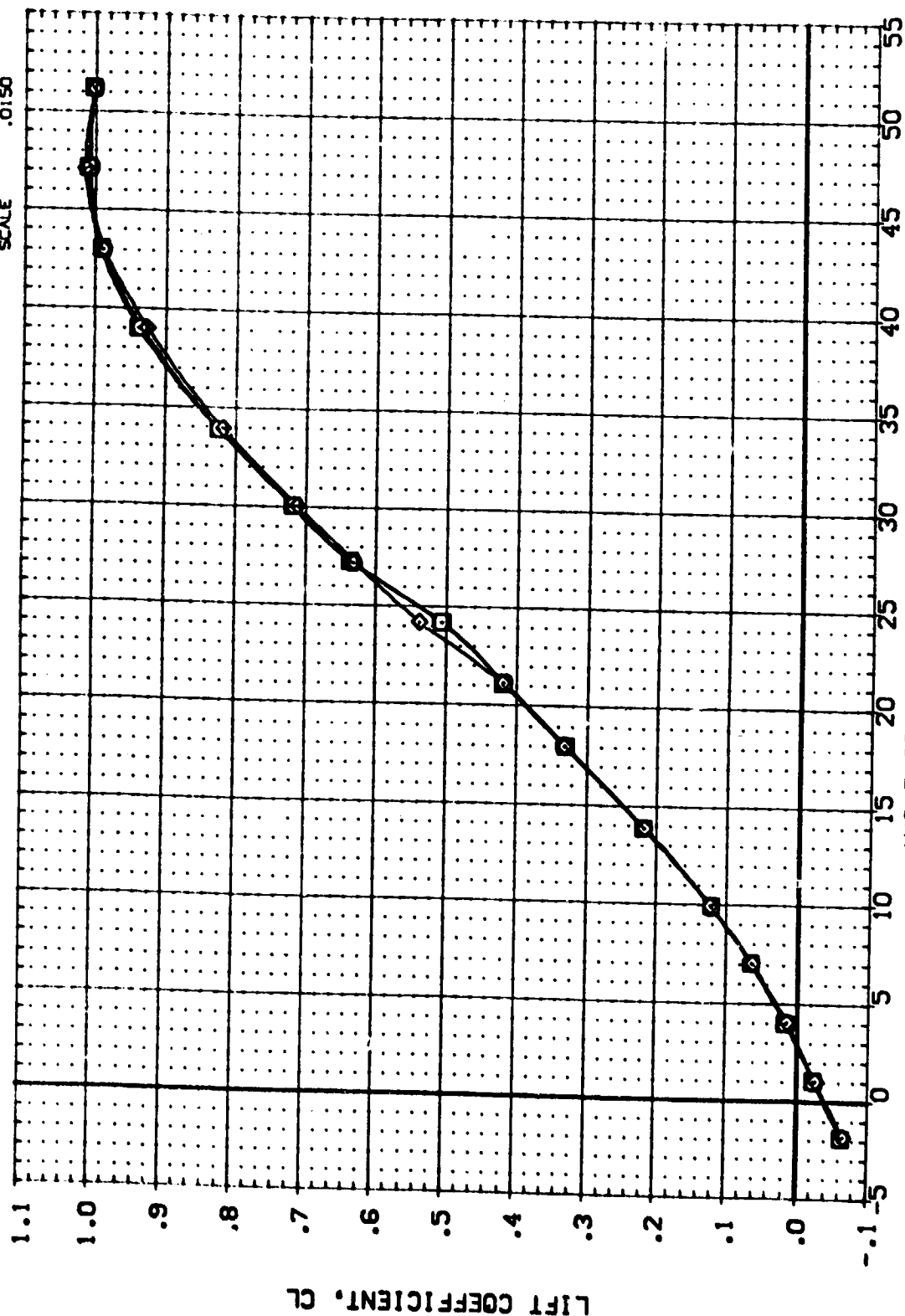


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BD FLAP	REFERENCE INFORMATION
(CB0020)	AVES 3.5-160 DA11B (B10F4C307G48)(W87E10)(V595)	.000	-10.000	.000	-14.250	SREF 2690.0000 SO.FT.
(CB0021)	AVES 3.5-160 DA11B (B10F4C307G48)(W87E10)(V595)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(CB0819)	AVES 3.5-160 DA11B (B10F4C307G48)(W87E10)(V595)	.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
						YREF 1076.4800 IN.
						YREF 400.0000 IN.
						YREF 400.0000 IN.
						SCALE .0150

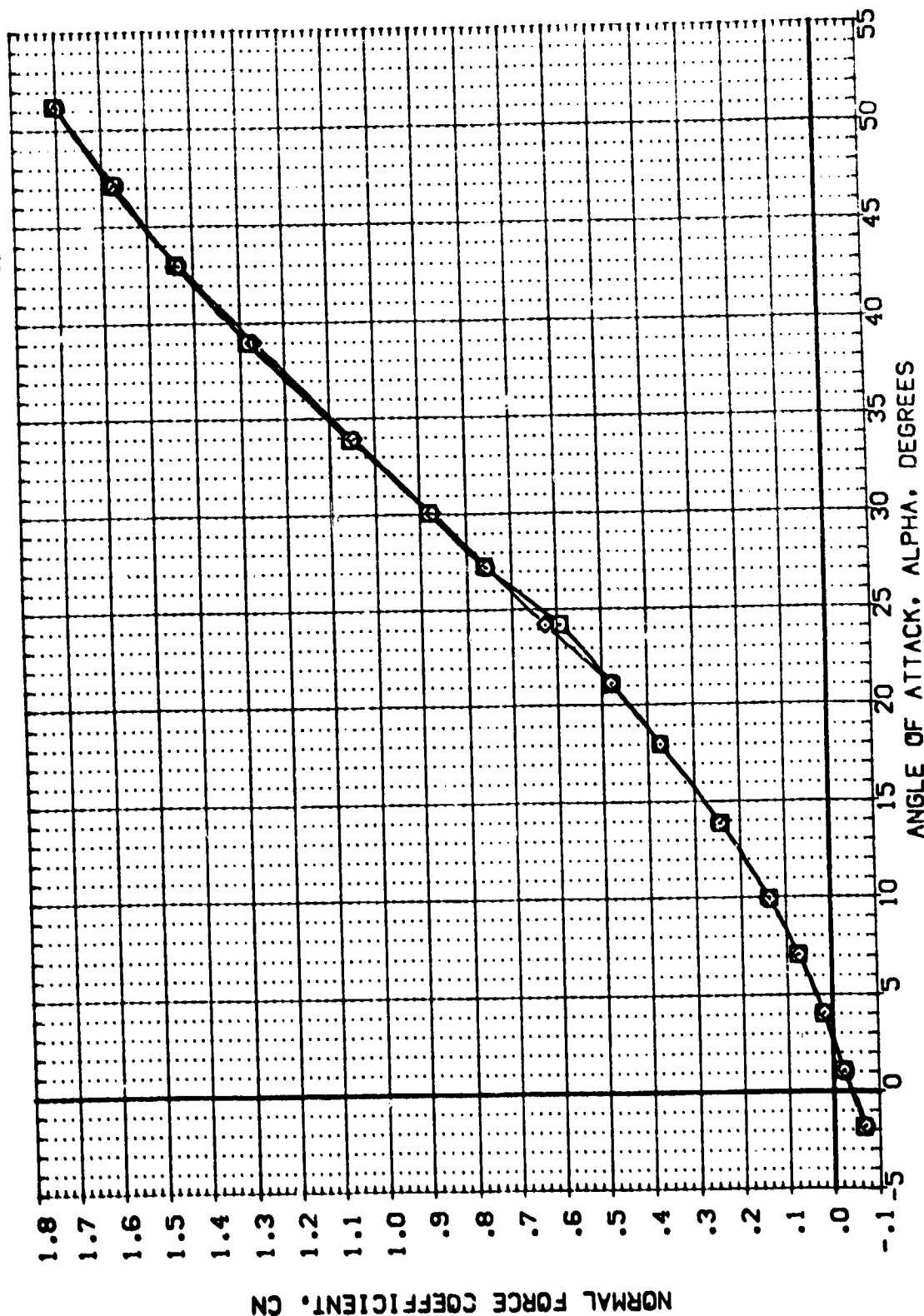


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(CBK020)	AMES 3.5-150 0A11B (B10F4C507H3-8)(V87E18)(V5RS)	.000	-10.000	.000	-14.250	SREF 2690.0000 SQ.FT.
(CBK021)	AMES 3.5-150 0A11B (B10F4C507H3-8)(V87E18)(V5RS)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(CBK019)	AMES 3.5-150 0A11B (B10F4C507H3-8)(V87E18)(V5RS)	.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
						XREF 1076.4800 IN.
						YREF .0000 IN.
						ZREF 100.0000 IN.
						SCALE .0150

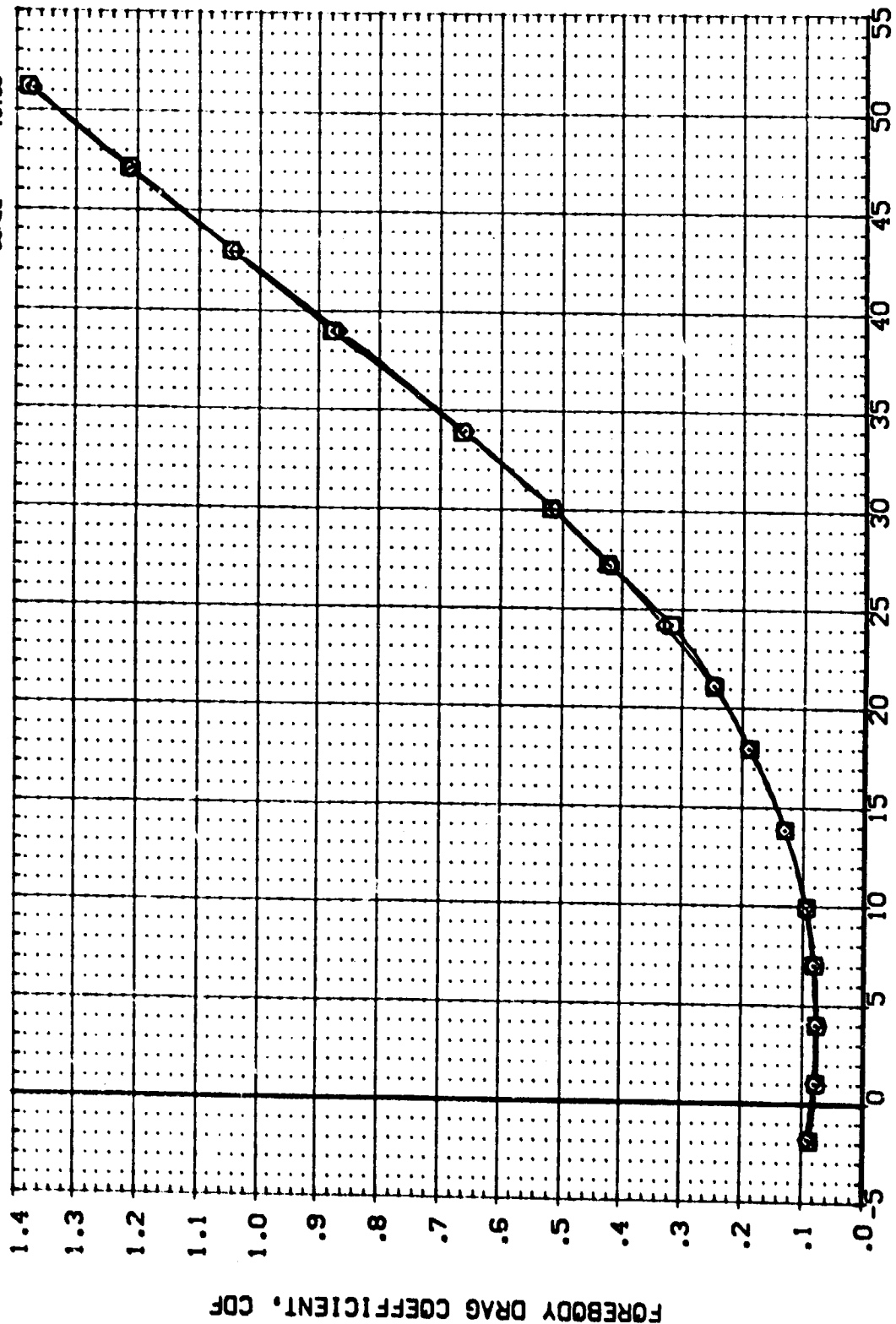


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPEEDBRAKES	SDFLAP	REFERENCE INFORMATION
(CB0020)	AVES 3-5-160 CA118 (B10F4C307KQ48)(V87E18)(V395)	.000	-10.000	.000	-14.250	SREF 2690.0000 SQ.FT.
(CB0021)	AVES 3-5-160 CA118 (B10F4C307KQ48)(V87E18)(V395)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(CB0019)	AVES 3-5-160 CA118 (B10F4C307KQ48)(V87E18)(V395)	.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
						XTRP 1076.4800 IN.
						YTRP 400.0000 IN.
						ZTRP 400.0000 IN.
						SCALE .0150

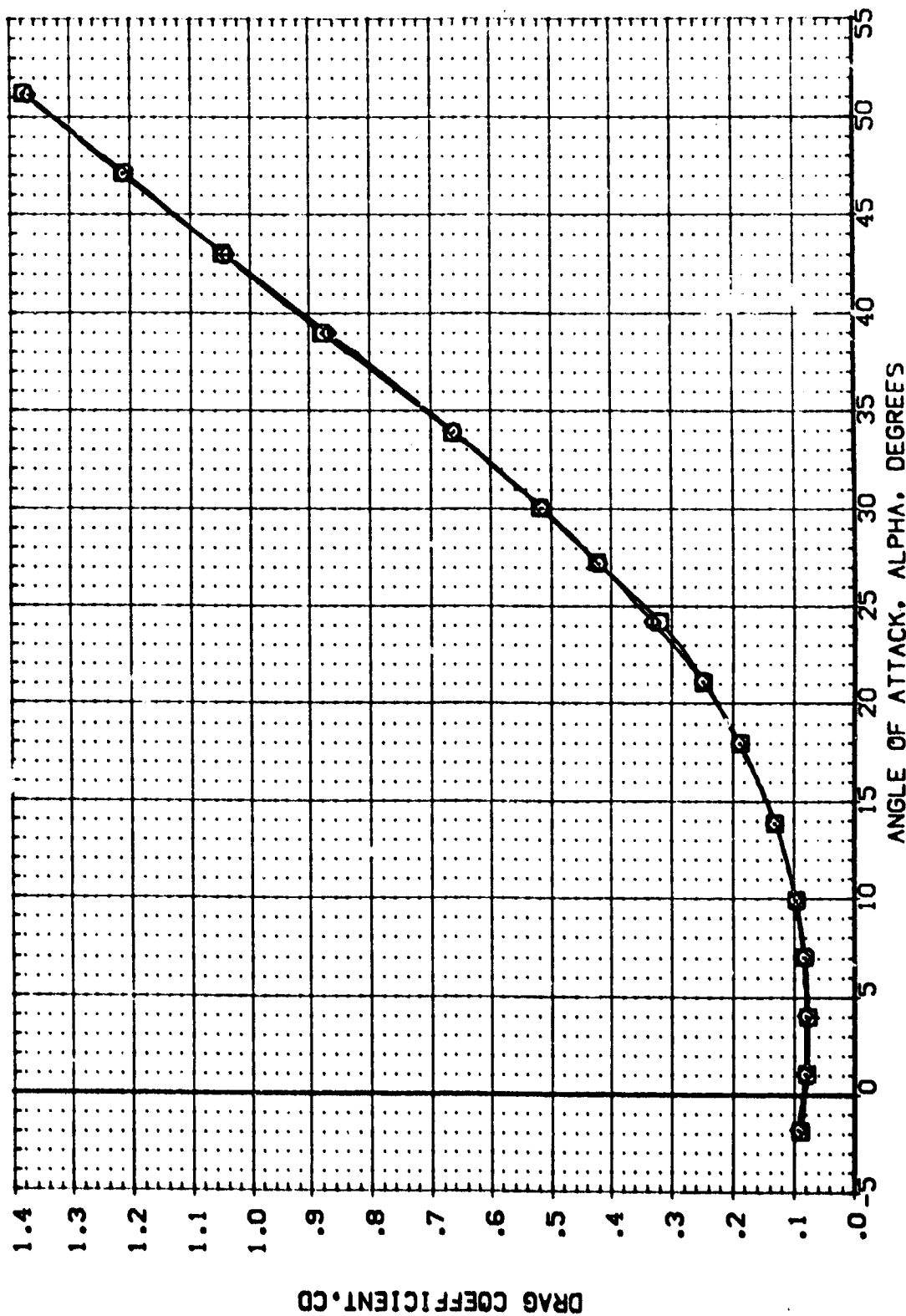


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL: (CBX020) (CBX021) (CBX019)

COEFFICIENT DESCRIPTION: AYES 3.5-160 OA11B (B10F4C507H3-8) (V87E18) (V59S) AYES 3.5-160 OA11B (B10F4C507H3-8) (V87E18) (V59S) AYES 3.5-160 OA11B (B10F4C507H3-8) (V87E18) (V59S)

ELEVATION: .000 .000 .000

RUDER: -10.000 -10.000 -10.000

SPEEDBRAKES: .000 24.920 54.920

BUFLAP: -14.250 -14.250 -14.250

REFERENCE INFORMATION: SREF 2690.0000 SO.FT. IN. LREF 474.8100 IN. BREF 936.6800 IN. XMRP 1076.4800 IN. YMRP .0000 IN. ZMRP 400.0000 IN. SCALE .0150

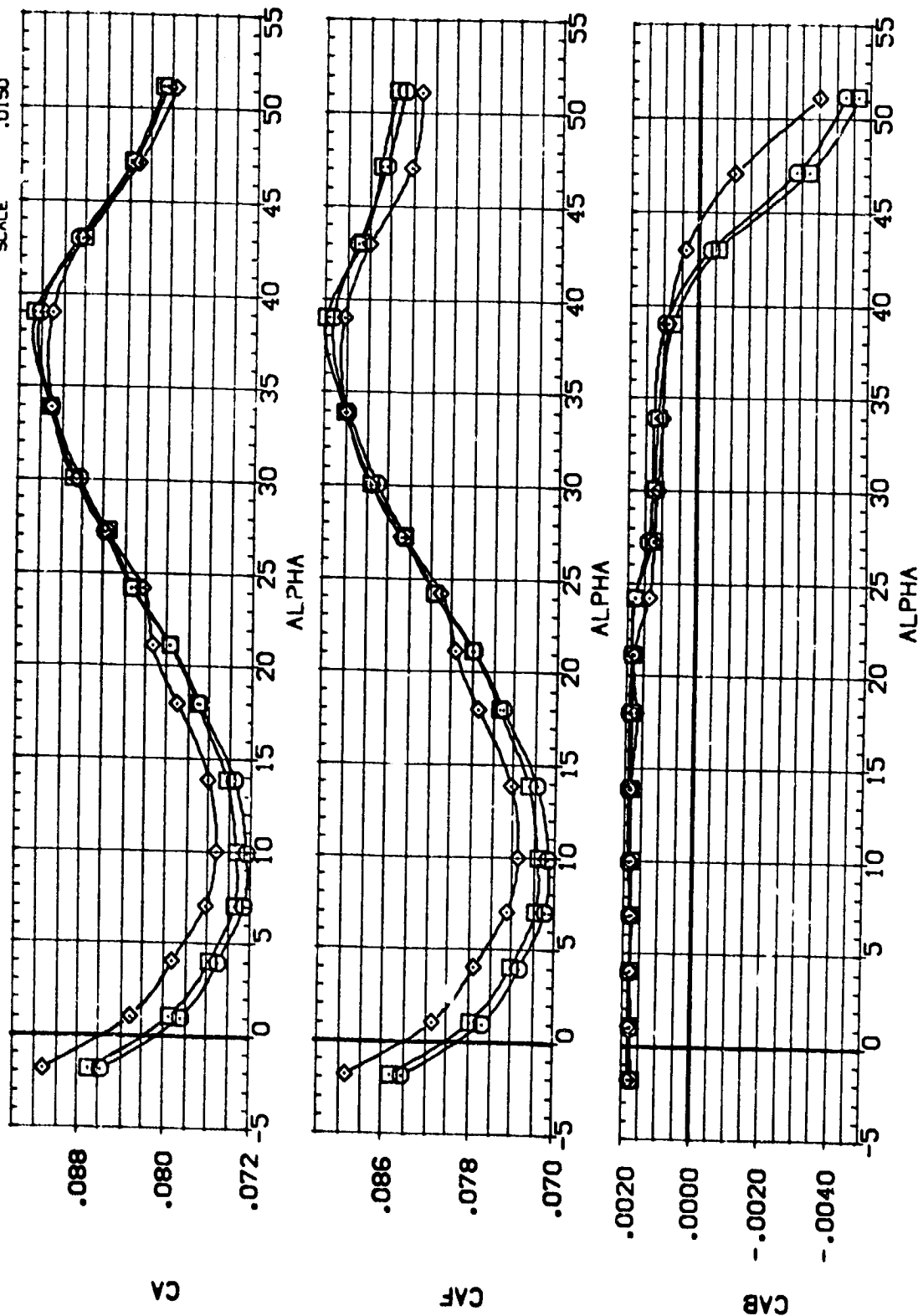


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION
(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(CB0020)	AVES 3.5-160 CA11B (B10F4C507N3-8)(16.7E18)(V395)	.000	-10.000	.000	-14.250	SREF 2650.0000 50.000
(CB0021)	AVES 3.5-160 CA11B (B10F4C507N3-8)(16.7E18)(V395)	.000	-10.000	24.920	-14.250	LREF 474.8100 10.000
(CB0019)	AVES 3.5-160 CA11B (B10F4C507N3-8)(16.7E18)(V395)	.000	-10.000	54.920	-14.250	BREF 936.6800 10.000
						XREF 1076.4800 10.000
						YREF 400.0000 10.000
						ZREF 400.0000 10.000
						SCALE .0150

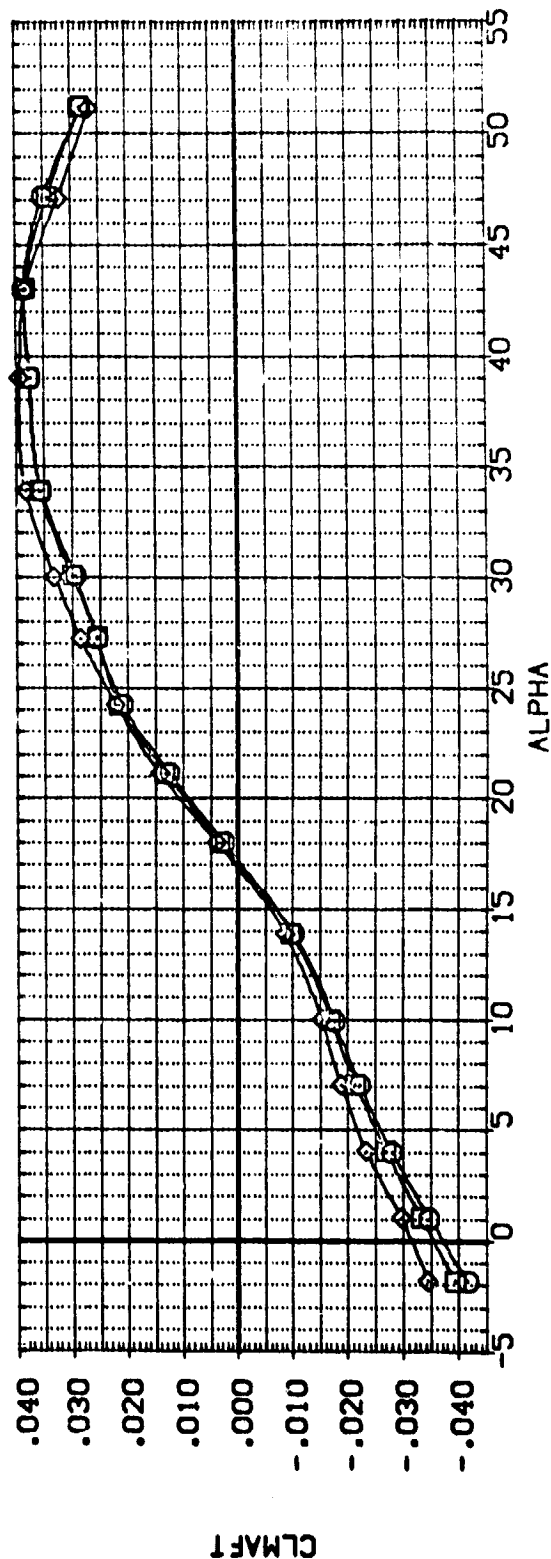
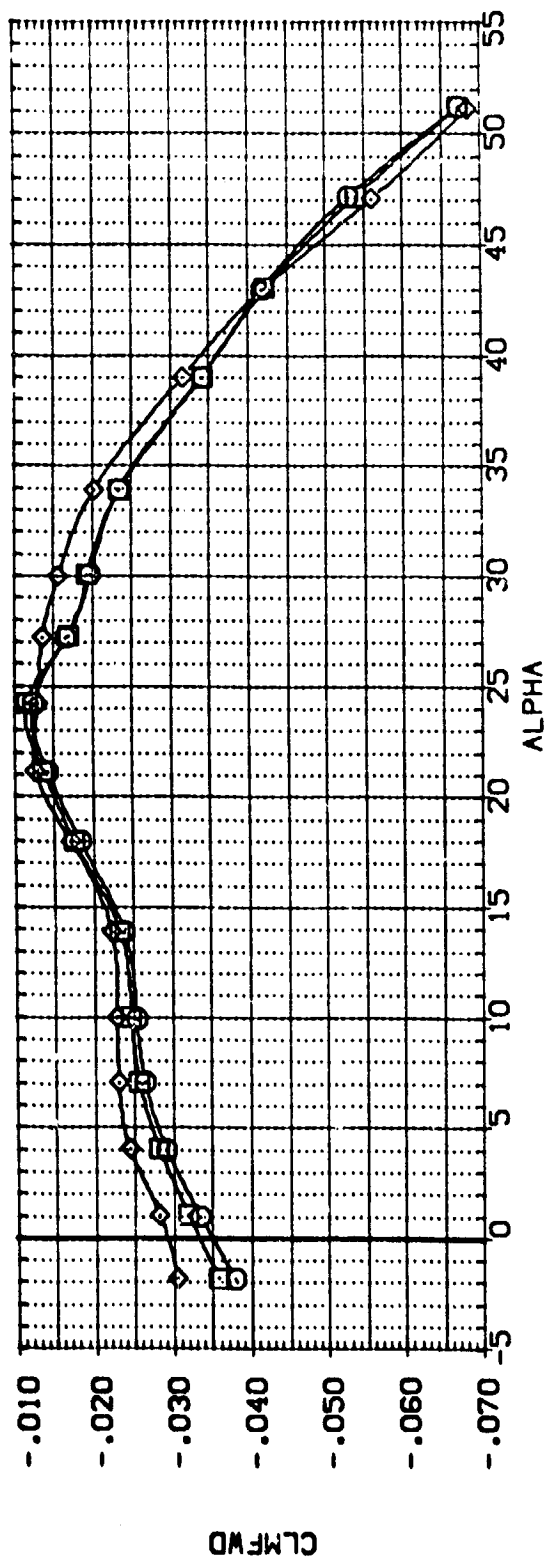


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CBK020) ARES 3.5-160 DAI1B (B10F4C507H3-48)(V87E18)(V59R5)
 (CBK021) ARES 3.5-160 DAI1B (910F4C507H3-48)(V87E18)(V59R5)
 (CBK019) ARES 3.5-160 DAI1B (B10F4C507H3-48)(V87E18)(V59R5)

ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
.000	-10.000	.000	-14.250	SREF 2690.0000 SQ.FT.
.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
				YREF 1076.4800 IN.
				ZREF 400.0000 IN.
				SCALE .0150

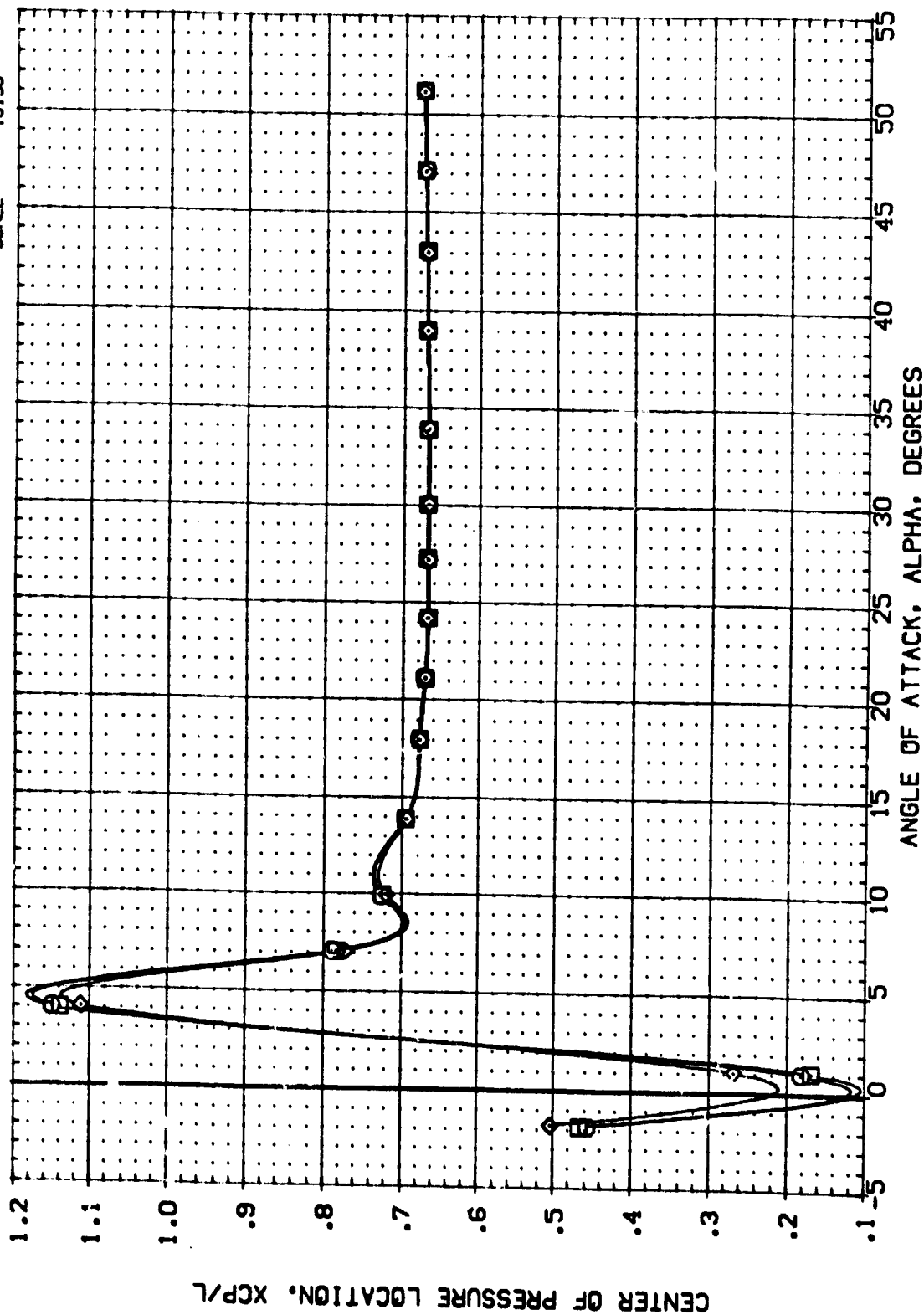


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	FLAPER	SPOILER	BOFLAP	REFERENCE INFORMATION
(CB0020)	AVES 3.5-180 CA11B (B10F4C507H3-8)(V87E18)(V87S)	.000	-10.000	.000	-14.250	SREF 2690.0000 SQ.FT.
(CB0021)	AVES 3.5-180 CA11B (B10F4C507H3-8)(V87E18)(V87S)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(CB0019)	AVES 3.5-180 CA11B (B10F4C507H3-8)(V87E18)(V87S)	.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
						XREF 1076.4800 IN.
						YREF 400.0000 IN.
						ZREF 400.0000 IN.
						SCALE .0150

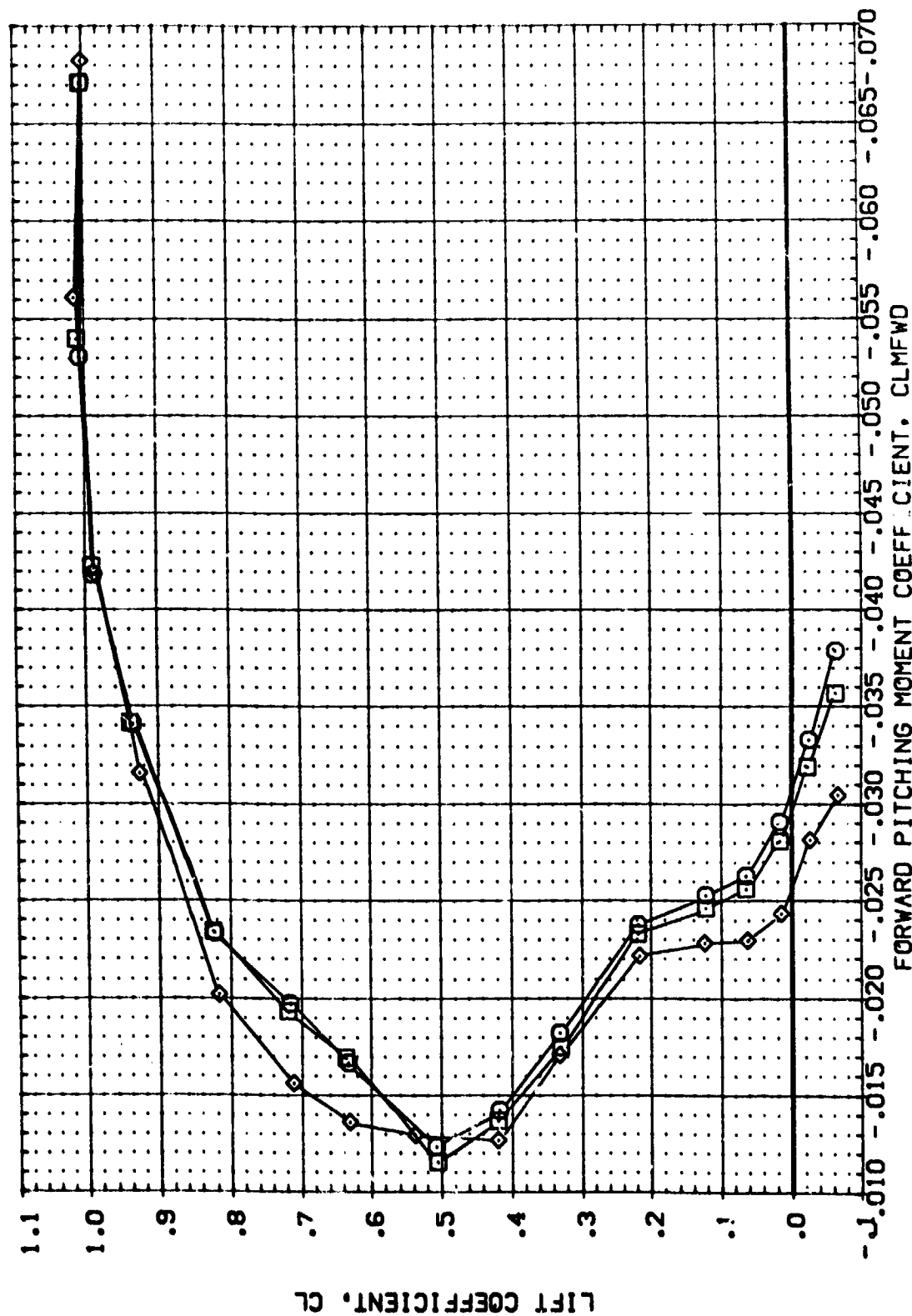


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPEEDBRK	BOFLAP	REFERENCE INFORMATION
(CBX020)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V59S)	.000	-10.000	.000	-14.250	SREF 2690.0000 SQ.FT.
(CBX021)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V59S)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(CBX019)	AVES 3.5-160 DA11B (B10F4C507H3-8)(V87E18)(V59S)	.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

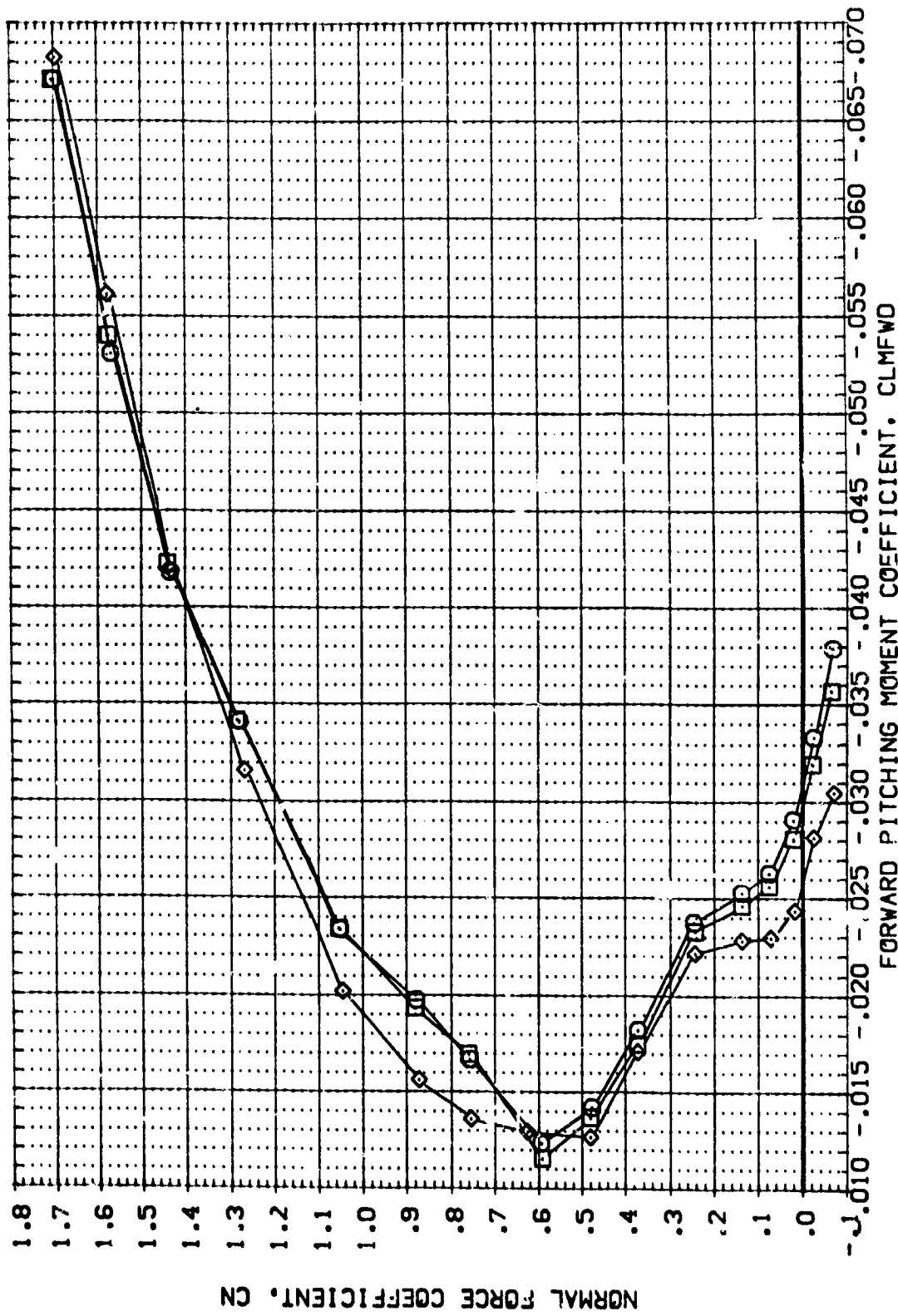


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUD/FR	SPD/BRK	BO/FLAP	REFERENCE INFORMATION
(CB020)	AMES 3.5-160 CA116 (B10F45077GNG)(V87E10)(V5RS)	.000	-10.000	.000	-14.250	SREF 2650.0000 50.FT.
(CB021)	AMES 3.5-160 CA116 (B10F45077GNG)(V87E10)(V5RS)	.000	-10.000	24.920	-14.250	LREF 474.8100 N.
(CB019)	AMES 3.5-160 CA113 (B10F45077GNG)(V87E10)(V5RS)	.000	-10.000	54.920	-14.250	BREF 936.6800 N.
						XREF 1076.4800 N.
						YREF .0000 N.
						ZREF 400.0000 N.
						SCALE .0150

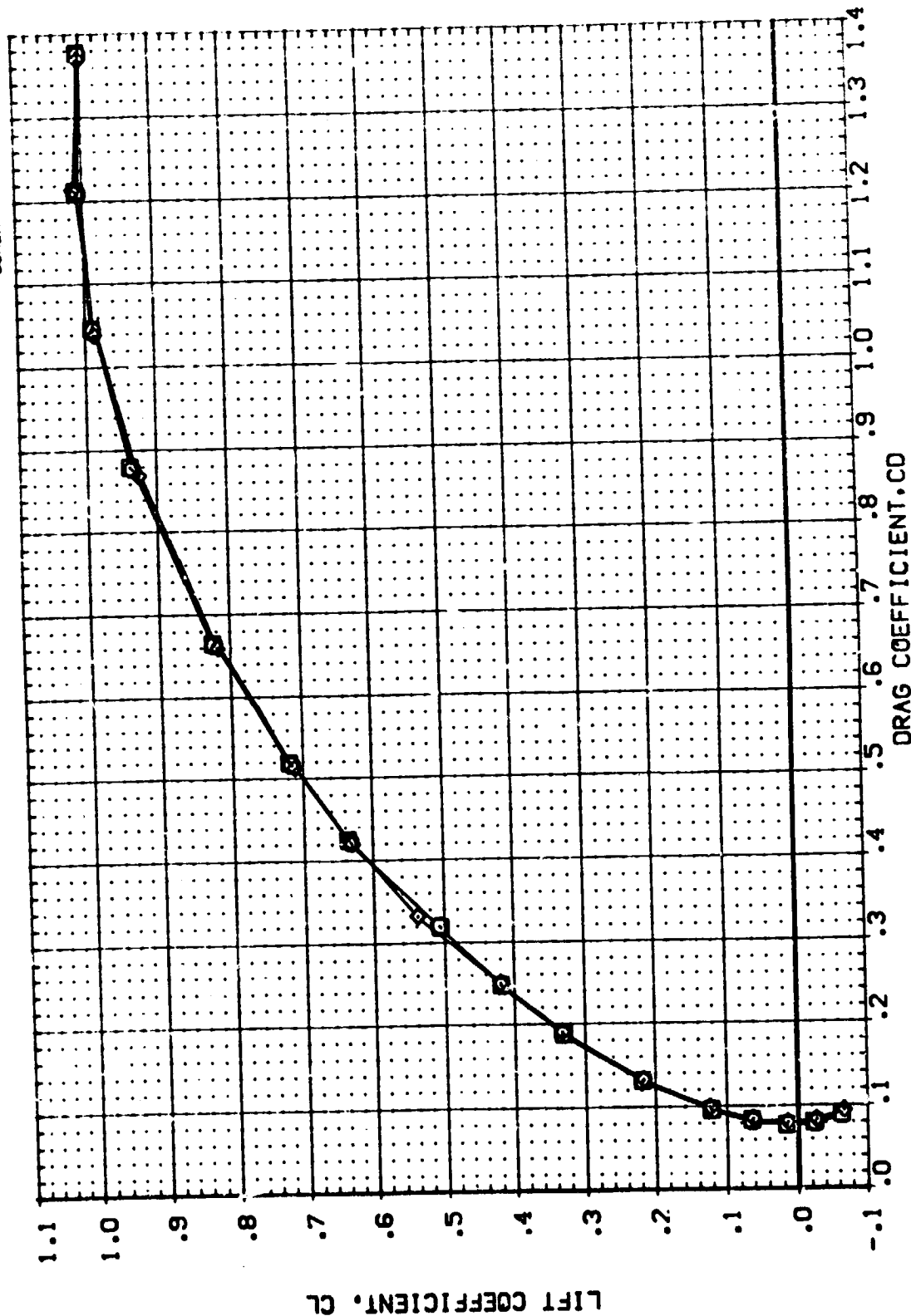


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32



DATA SET SYMBOL CD FIGURE ON DESCRIPTION
 (ABXA20) 1 ABXA20 (B13F4C507H348)(V87E18)(V5K5)
 (ABXA21) 1 ABXA21 (B13F4C507H348)(V87E18)(V5K5)
 (ABXA22) 1 ABXA22 (B13F4C507H348)(V87E18)(V5K5)

ELEVON RUDDER SPEEDBRAK BOFLAP REFERENCE INFORMATION
 .000 -10.000 .000 -14.250 SREF 2650.0000 SQ.FT.
 .000 -10.000 .000 -14.250 LREF 474.8100 IN.
 .000 -10.000 .000 -14.250 BREF 936.6800 IN.
 .000 .000 .000 .000 XPRP 1076.4800 IN.
 .000 .000 .000 .000 YPRP 100.0000 IN.
 .000 .000 .000 .000 ZPRP 100.0000 IN.
 .000 .000 .000 .000 SCALE .0150

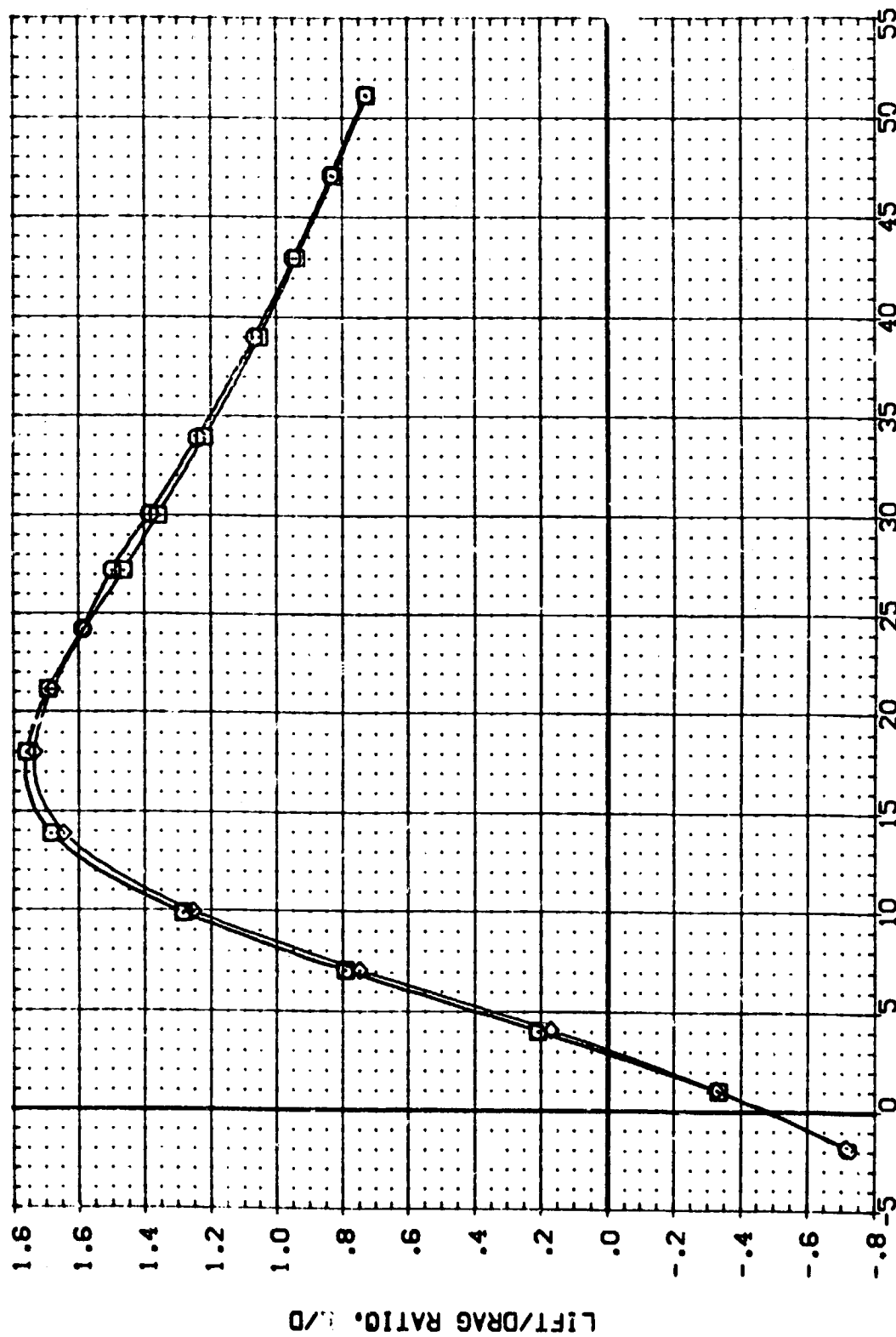


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPEEDBRK	BOFLAP	REFERENCE INFORMATION
(DBA20)	AVES 3.5-160 DA118 (810F4C507H3G)(1W87E18)(1V87E18)	.000	-10.000	.000	-14.250	SREF 2690.0000 50.FT.
(DBA21)	AVES 3.5-160 DA118 (810F4C507H3G)(1W87E18)(1V87E18)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(DBA19)	AVES 3.5-160 DA118 (810F4C507H3G)(1W87E18)(1V87E18)	.000	-10.000	54.920	-14.250	BREF 936.6800 IN.
						APREF 1076.4800 IN.
						THREF 400.0000 IN.
						ZHREF 400.0000 IN.
						SCALE .0150

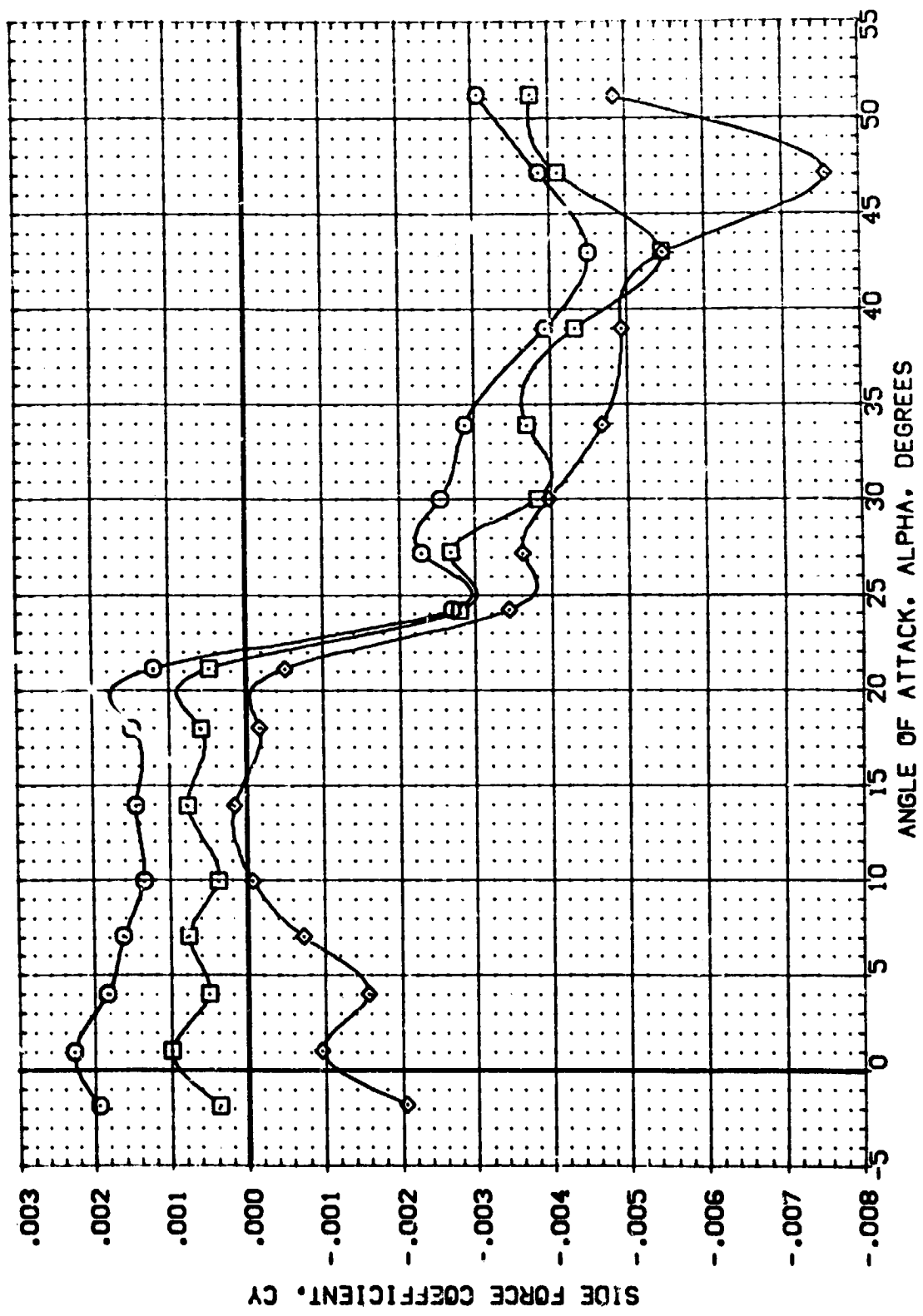


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	DBRK	BOFLAP	REFERENCE INFORMATION
(DBA20)	AVES 3.15 150 CA118 (B1 OF 4CS07H348) (V87E18) (V59S)	.000	-10.000	24.920	-14.250	SREF 2690.0000 SQ.FT.
(DBA21)	AVES 3.15 150 CA118 (B1 OF 4CS07H348) (V87E18) (V59S)	.000	-10.000	54.920	-14.250	LREF 474.8100 IN.
(DBA19)	AVES 3.15 150 CA118 (B1 OF 4CS07H348) (V87E18) (V59S)	.000	-10.000			BREF 936.6800 IN.
						YMRP 1076.4800 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

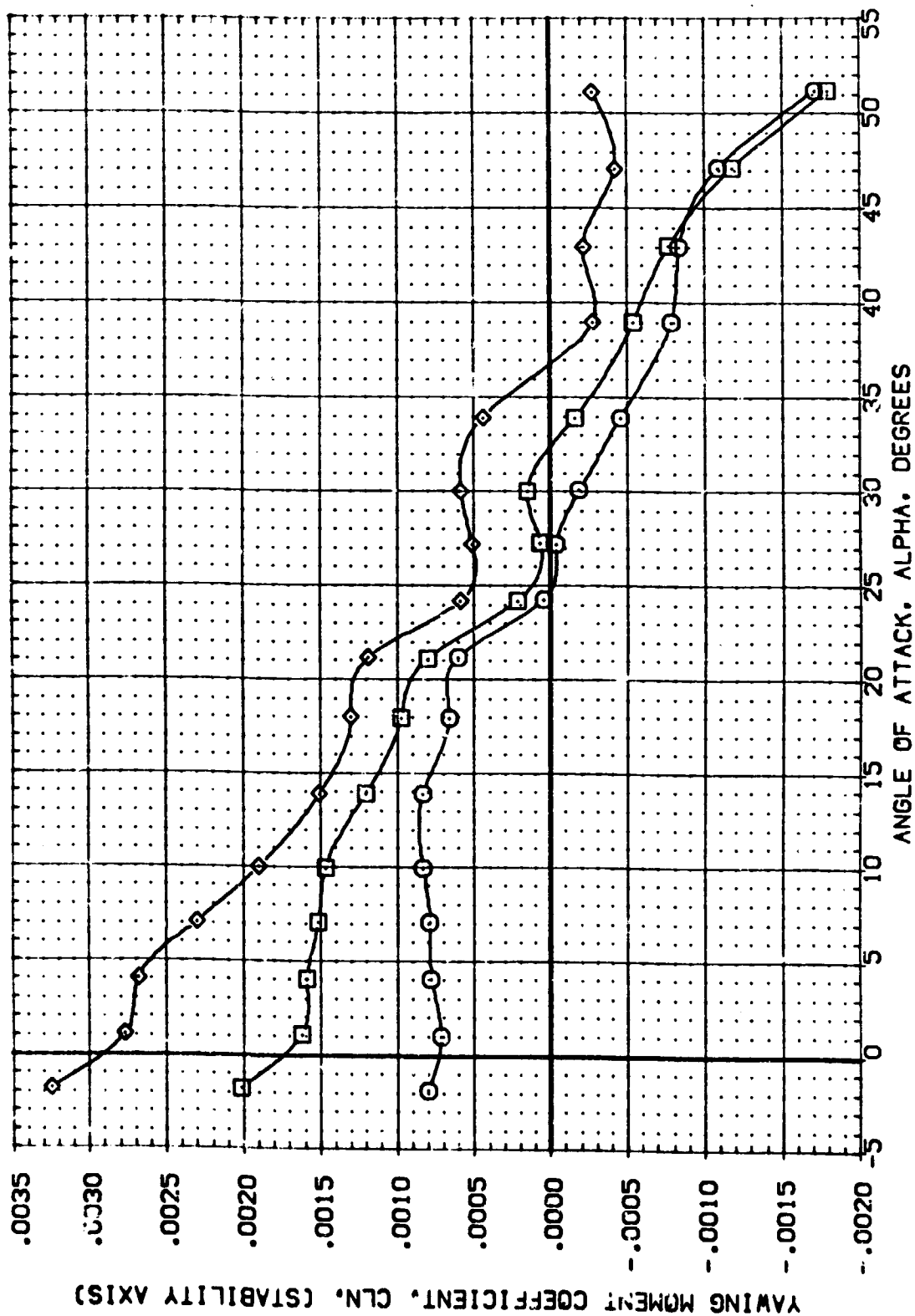


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPEEDBRAKES	BD FLAP	REFERENCE INFORMATION
(DBKX20)	AVES 3.5-160 CA11B (810F4C507K3-8)(V87E18)(V5RS)	.000	-10.000	.000	-14.250	SREF 2650.0000 50.F.T.
(DBKX21)	AVES 3.5-160 CA11B (810F4C507K3-8)(V87E18)(V5RS)	.000	-10.000	24.920	-14.250	LREF 474.8100 IN.
(DBKX19)	AVES 3.5-160 CA11B (810F4C507K3-8)(V87E18)(V5RS)	.000	-10.000	54.520	-14.250	BREF 936.6800 IN.
						YPRP 1076.4600 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

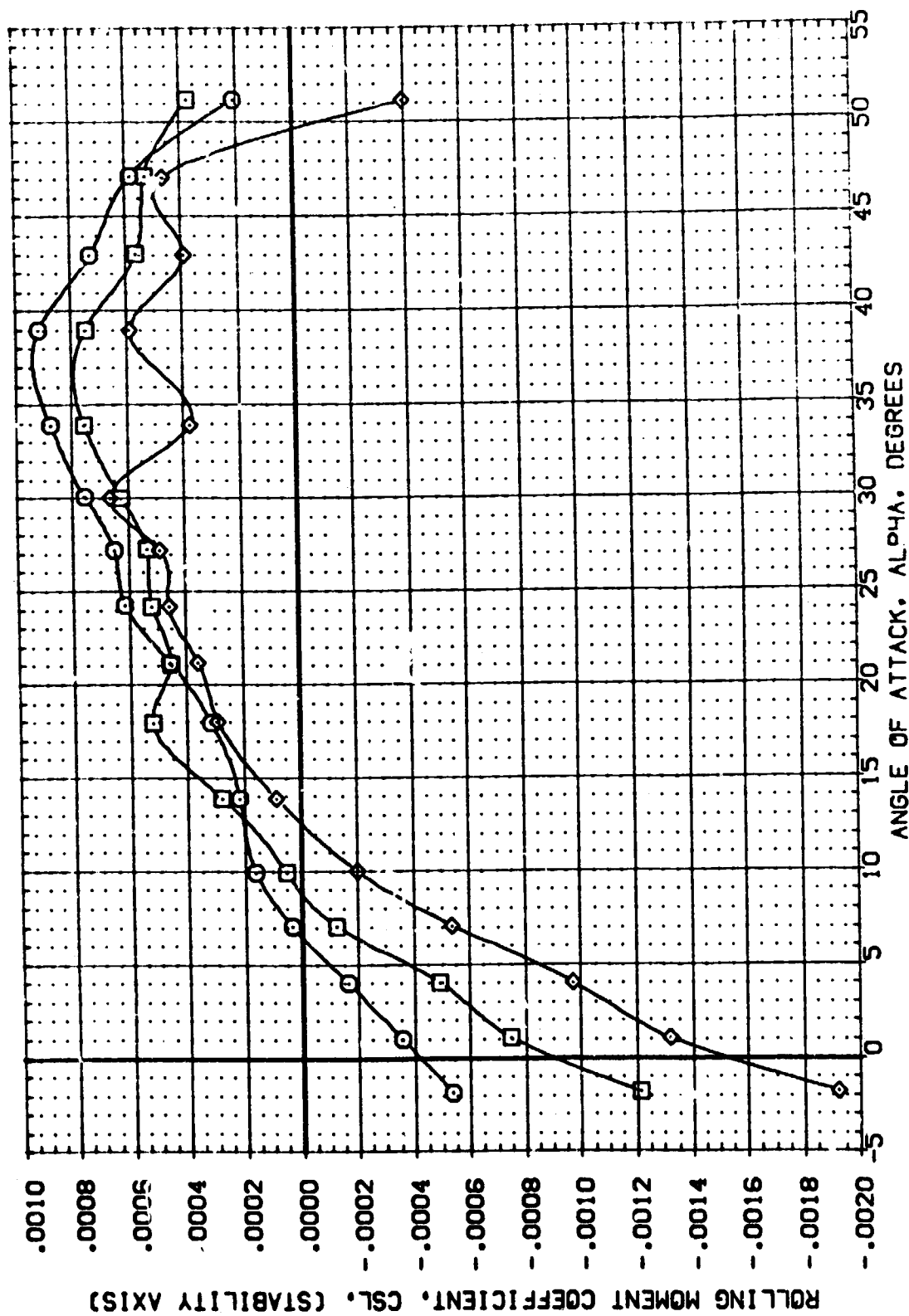


FIG. 6.A EFFECT OF SPEEDBRAKE DEFLECTION

(A)MACH = 7.32

REFERENCE INFORMATION

SREF	2690.0000	SO.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.4800	IN.
YMRP	.0000	IN.
ZMRP	400.0000	IN.
SCALE	.0150	

DEL SRK ELEVON RUDDER

DEL SRK	ELEVON	RUDDER
-54.920	.000	-10.000
-30.000	.000	-10.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FBK020)	8	APES 3.5 160 0A11B (B) OF 4CS07-3-81 (V585)	-54.920
(FBK021)	8	APES 3.5 160 0A11B (B) OF 4CS07-3-81 (V585)	-30.000

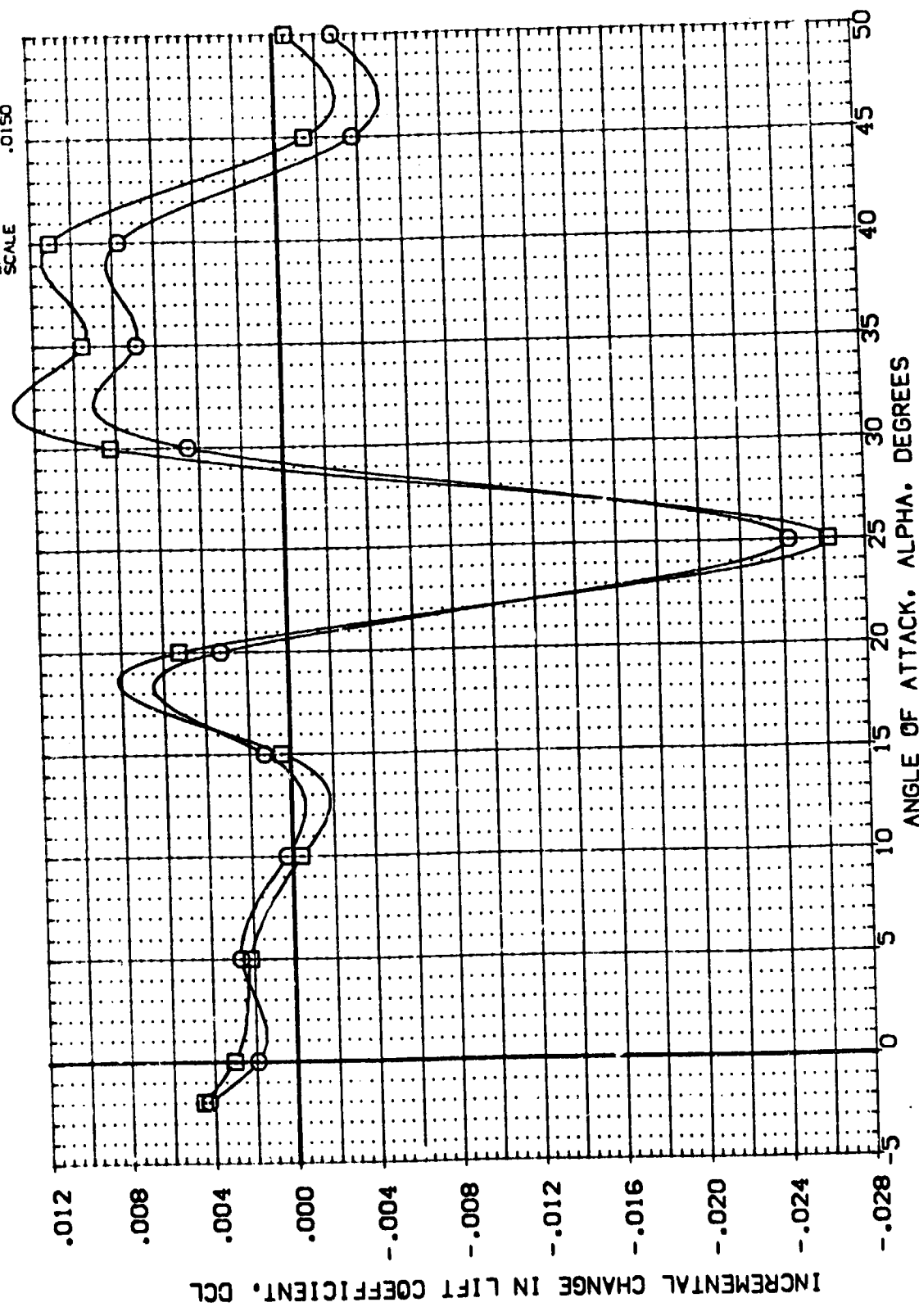


FIG. 6.B INCREMENTAL EFFECTS OF SPEEDBRAKE ON RUDDER EFFECTIVENESS
(A) MACH = 7.32

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FB0020)
(FB0021)

APES 3.5-160 DAI1B (B1DF4C5D7H3B)(V87E1B)(V87E1B)
APES 3.5-160 DAI1B (B1DF4C5D7H3B)(V87E1B)(V87E1B)

DELSBK ELEVON RUDDER
-54.920 .000 -10.000
-30.000 .000 -10.000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XPRP 1076.4800 IN.
YPRP .0000 IN.
ZPRP 400.0000 IN.
SCALE .0150

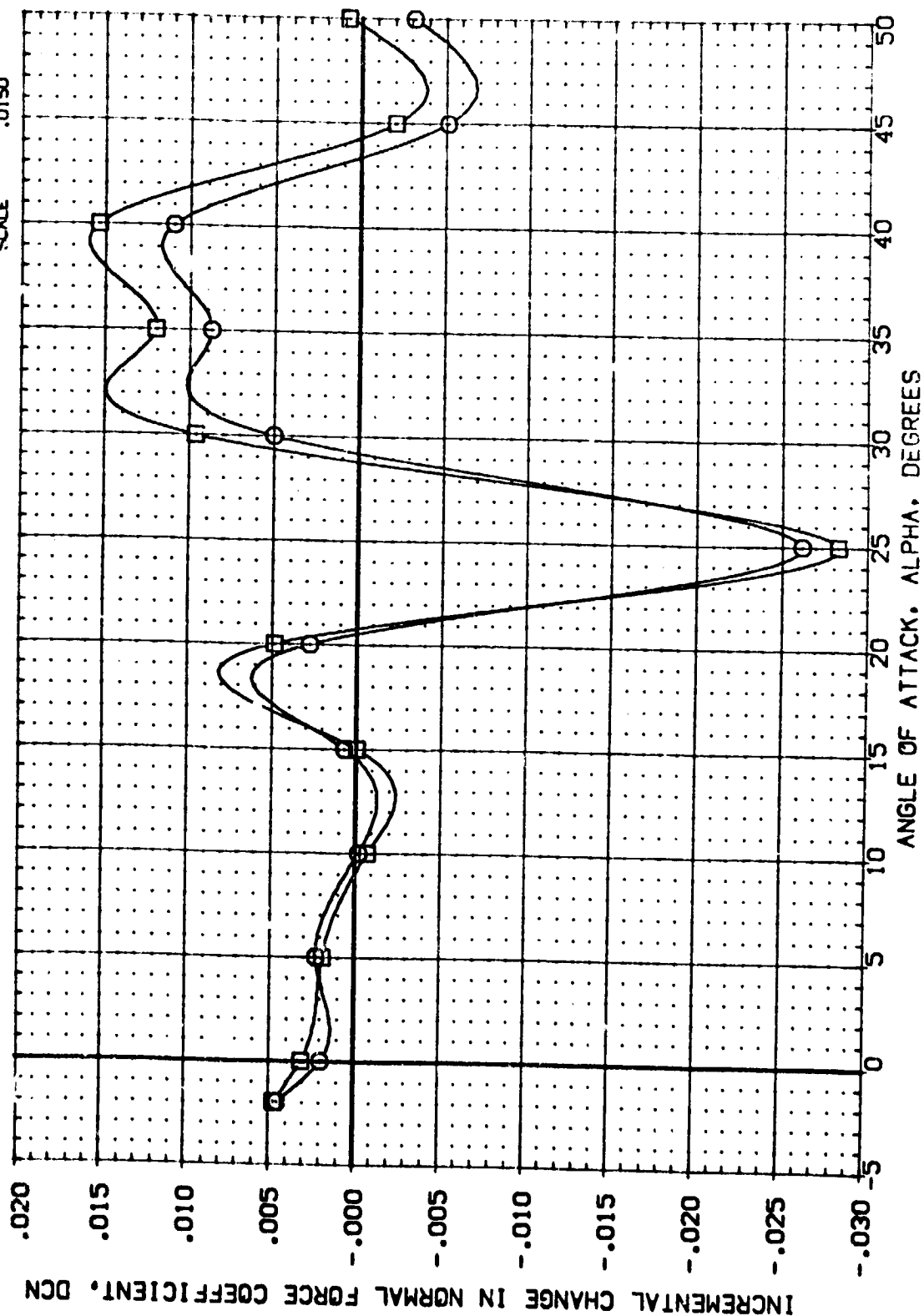


FIG. 6.B INCREMENTAL EFFECTS OF SPEEDBRAKE ON RUDDER EFFECTIVENESS

(A)MACH = 7.32



DATA SET SYMBOL
(FB0020)
(FB0021)

CONFIGURATION DESCRIPTION
AIES 3.5-180 DAI1B (B10F4C507M38)(V87E18)(V5R5)
AIES 3.5-180 DAI1B (B10F4C507M38)(V87E18)(V5R5)

DELSK ELEVON RUDDER
-54.920 .000 -10.000
-30.000 .000 -10.000

REFERENCE INFORMATION
SREF 2690.0000 SC.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.4800 IN.
YMRP .0000 IN.
ZMRP 400.0000 IN.
SCALE .0150

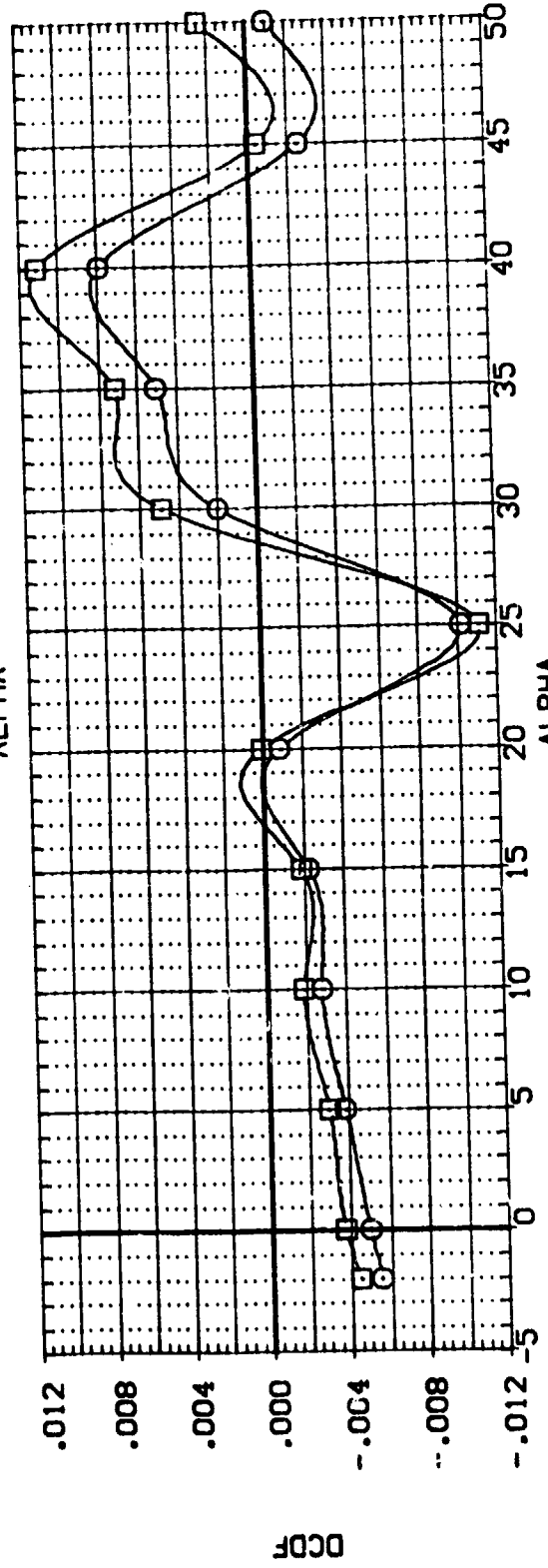
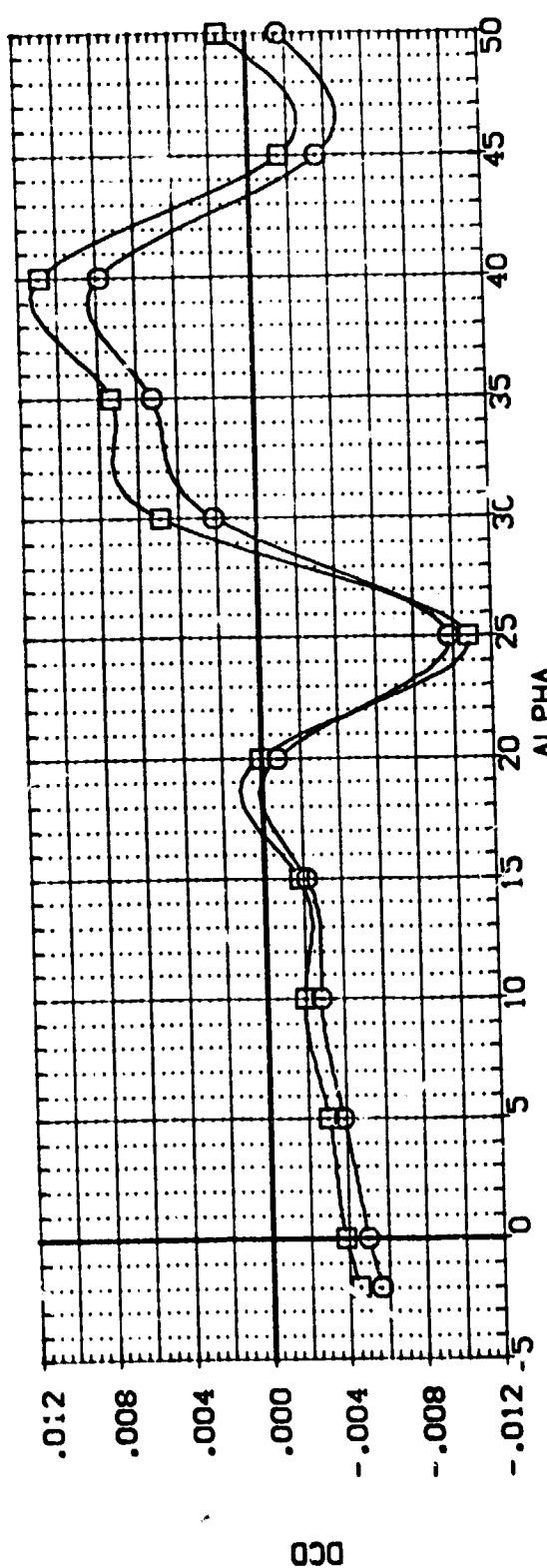


FIG. 6.B INCREMENTAL EFFECTS OF SPEEDBRAKE ON RUDDER EFFECTIVENESS

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(FB0020) □

AVES 3.5-160 DA11B (B10'4C507G-8) (V87E18) (V9M5)

DELSEA

ELEVON RUDDER

.000 -10.000

.000 -10.000

REFERENCE INFORMATION
SREF 2690.0000 92.F.T.
LREF 474.8100 IN.
BREF 936.6800 IN.
XPRP 1076.4800 IN.
YPRP .0000 IN.
ZPRP 400.0000 IN.
SCALE .0150

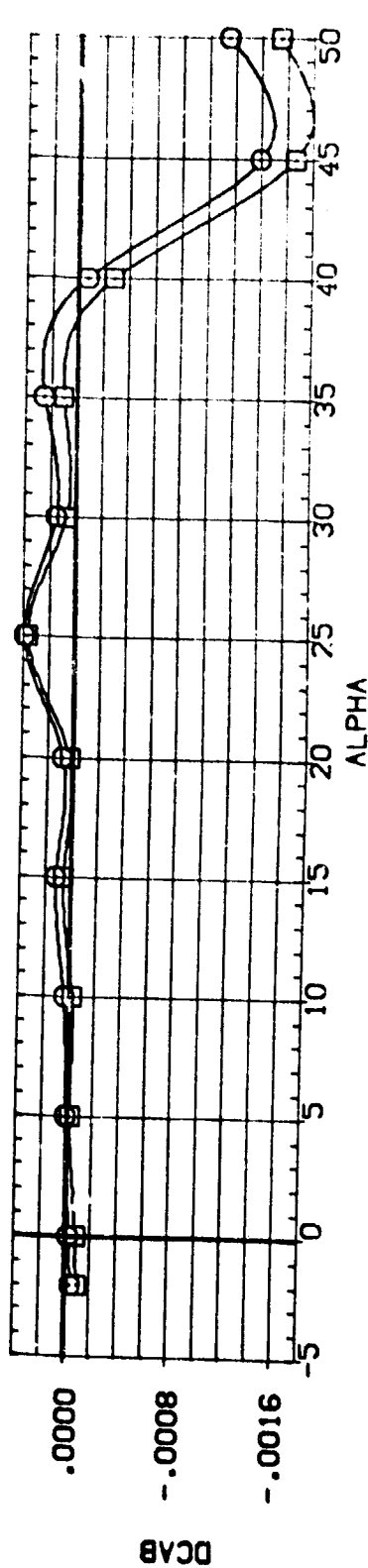
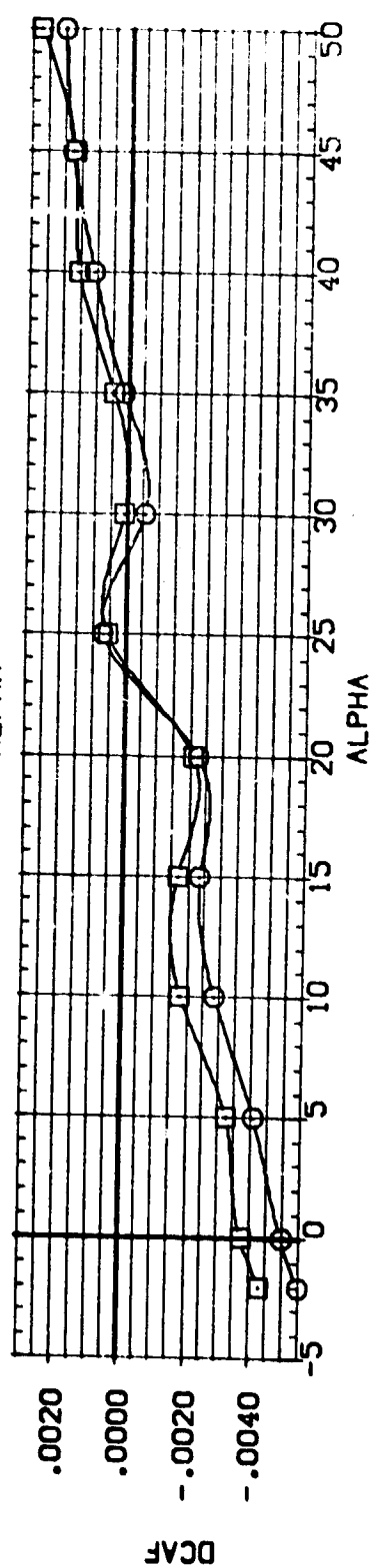
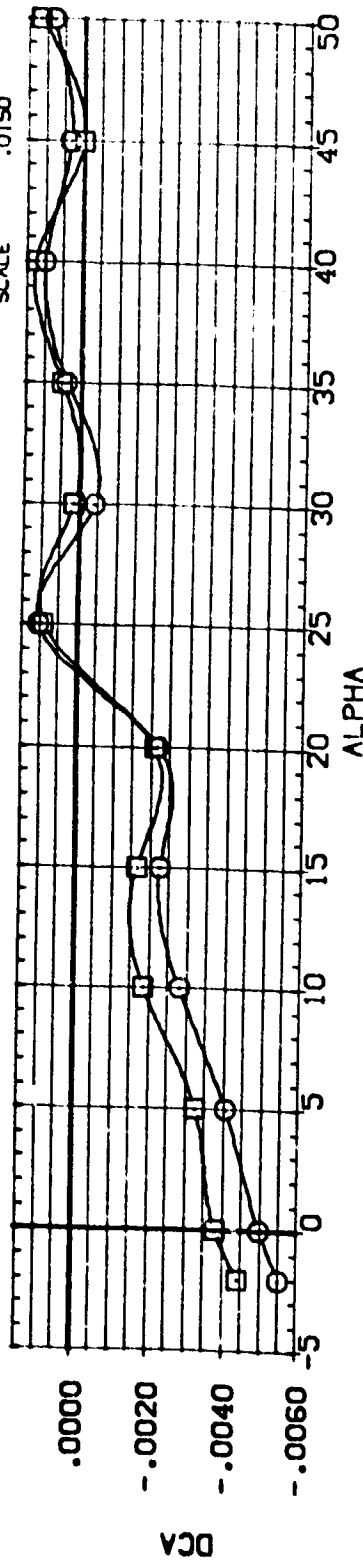


FIG. 6.B INCREMENTAL EFFECTS OF SPEEDBRAKE ON RUDDER EFFECTIVENESS

(A)MACH = 7.32



DATA SET SYMBOL
 (FBX020)
 (FBX021)

CONVERSION DESCRIPTION
 ARES 10-160 DAI1B (B104C5071348)(V87E18)(V8K5)
 ARES 10-160 DAI1B (B104C5071348)(V87E18)(V8K5)

DELSEK
 ELEVON
 RUDDER

REFERENCE INFORMATION
 SREF 2690.0000 SO.FT.
 UREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.4800 IN.
 YMRP 400.0000 IN.
 ZMRP 400.0000 IN.
 SCALE .0150

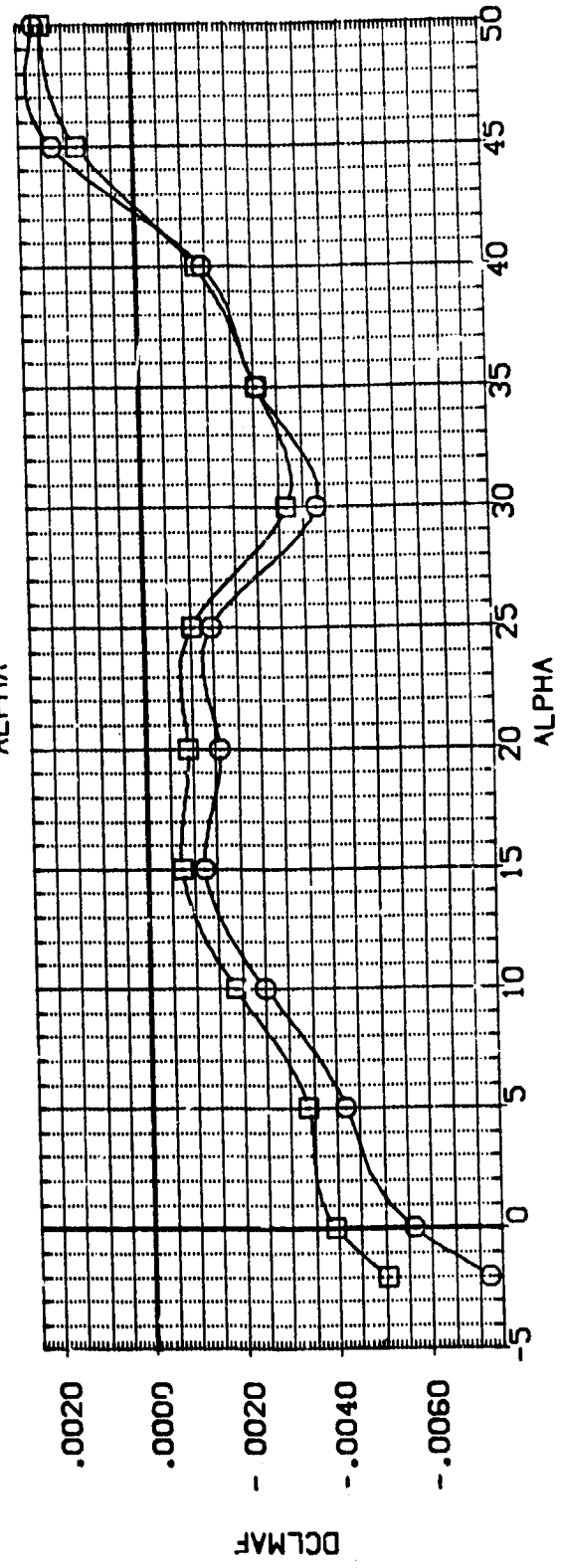
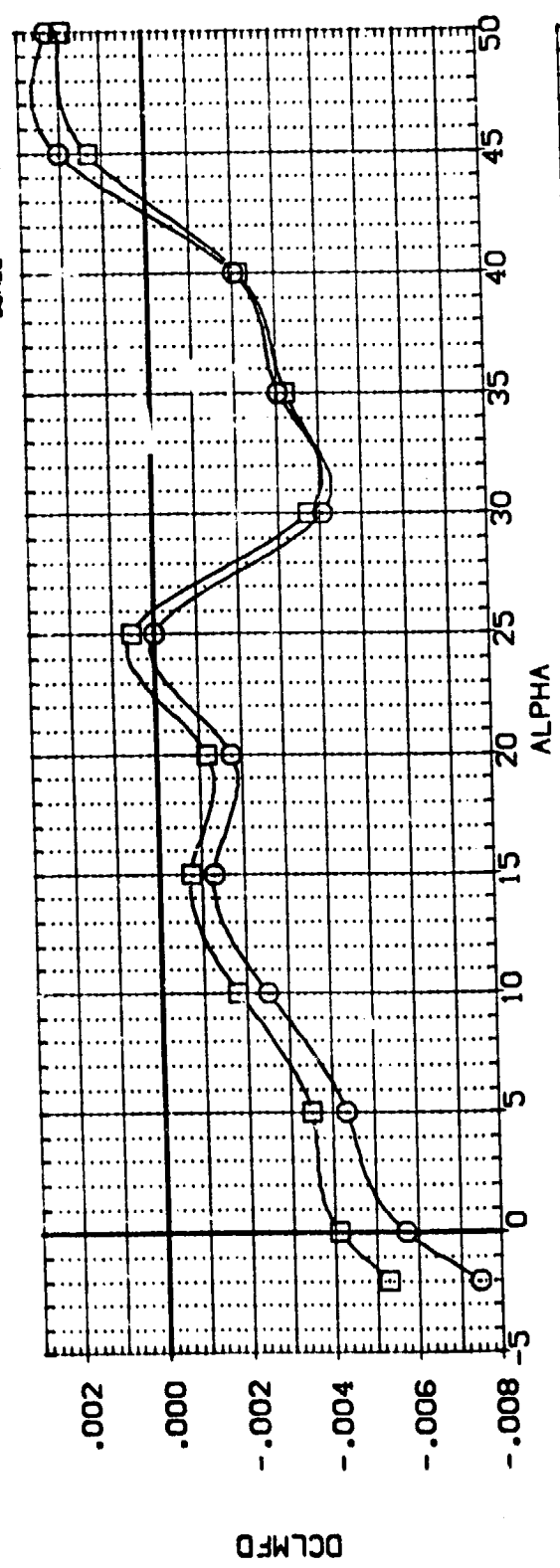


FIG. 6.8 INCREMENTAL EFFECTS OF SPEEDBRAKE ON RUDDER EFFECTIVENESS

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILERON	ELEVON	SPDRBK	EDFLAP	REFERENCE INFORMATION
(DBK03C)	AMES 3.5-160 OA118 (810FAC507) (V595)	5.000	.000	54.920	-14.250	SREF 2650.0000 SO.FT.
(DBK016)	AMES 3.5-160 OA118 (810FAC507) (V595)	5.000	-10.000	54.920	-14.250	LREF 474.8100 IN.
(DBK017)	AMES 3.5-160 OA118 (810FAC507) (V595)	5.000	-20.000	54.920	-14.250	BREF 936.8600 IN.
						YMRP 1076.4800 IN.
						ZMRP .0000 IN.
						SCALE .0150

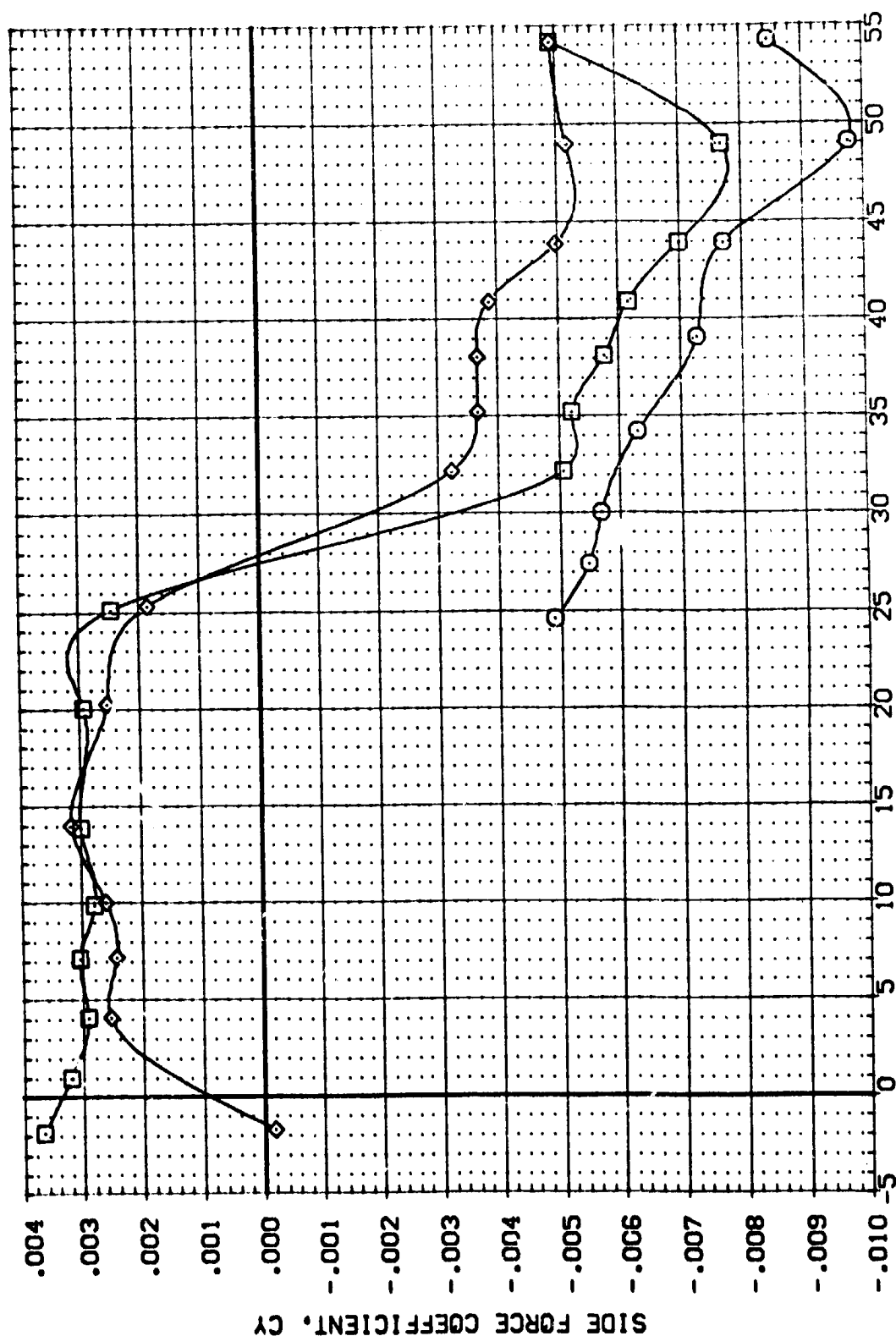


FIG. 7.A LATERAL-DIRECTIONAL EFFECTS OF AILERON CONTROL

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILERON	ELEVON	SPD BRK	BOFLAP	REFERENCE INFORMATION
(DBX030)	AMES 7.5-160 OA118 (B1) OF 4CS07H-3A81 (V87E18) (V5R5)	5.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(DBX016)	AMES 7.5-160 OA118 (B1) OF 4CS07H-3A81 (V87E18) (V5R5)	5.000	-10.000	54.920	-14.250	LREF 474.8100 IN.
(DBX017)	AMES 7.5-160 OA118 (B1) OF 4CS07H-3A81 (V87E18) (V5R5)	5.000	-20.000	54.920	-14.250	BREF 936.6800 IN.
						XMRP 1076.4800 IN.
						YMRP .0000 IN.
						ZMRP 400.0000 IN.
						SCALE .0150

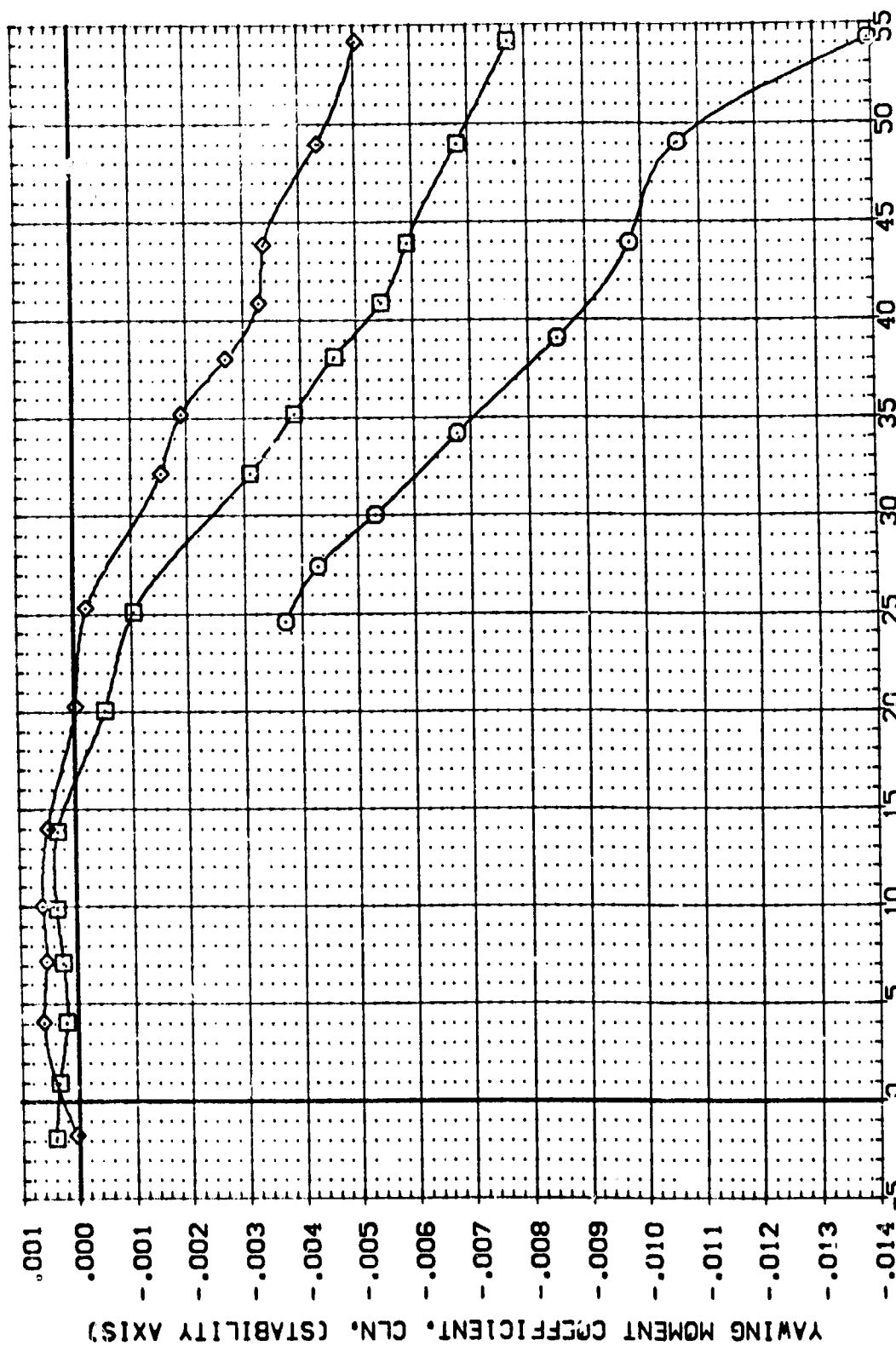


FIG. 7.A LATERAL-DIRECTIONAL EFFECTS OF AILERON CONTROL

(MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	AILERON ELEVON	SPDRBK	BOFLAP	REFERENCE INFORMATION
(DBK010)	AVES 3.5-160 DA118 (B1D4C507H3-8)(V87E18)(V59S)	5.000	54.920	-14.250	SREF 2690.0000 50.FT.
(DBK016)	AVES 3.5-160 DA118 (B1D4C507H3-8)(V87E18)(V59S)	-10.000	54.920	-14.250	LREF 474.8100 IN.
(DBK017)	AVES 3.5-160 DA118 (B1D4C507H3-8)(V87E18)(V59S)	5.000	54.920	-14.250	BREF 936.6800 IN.
					YREF 1076.4800 IN.
					ZREF 400.0000 IN.
					SCALE 0.0150

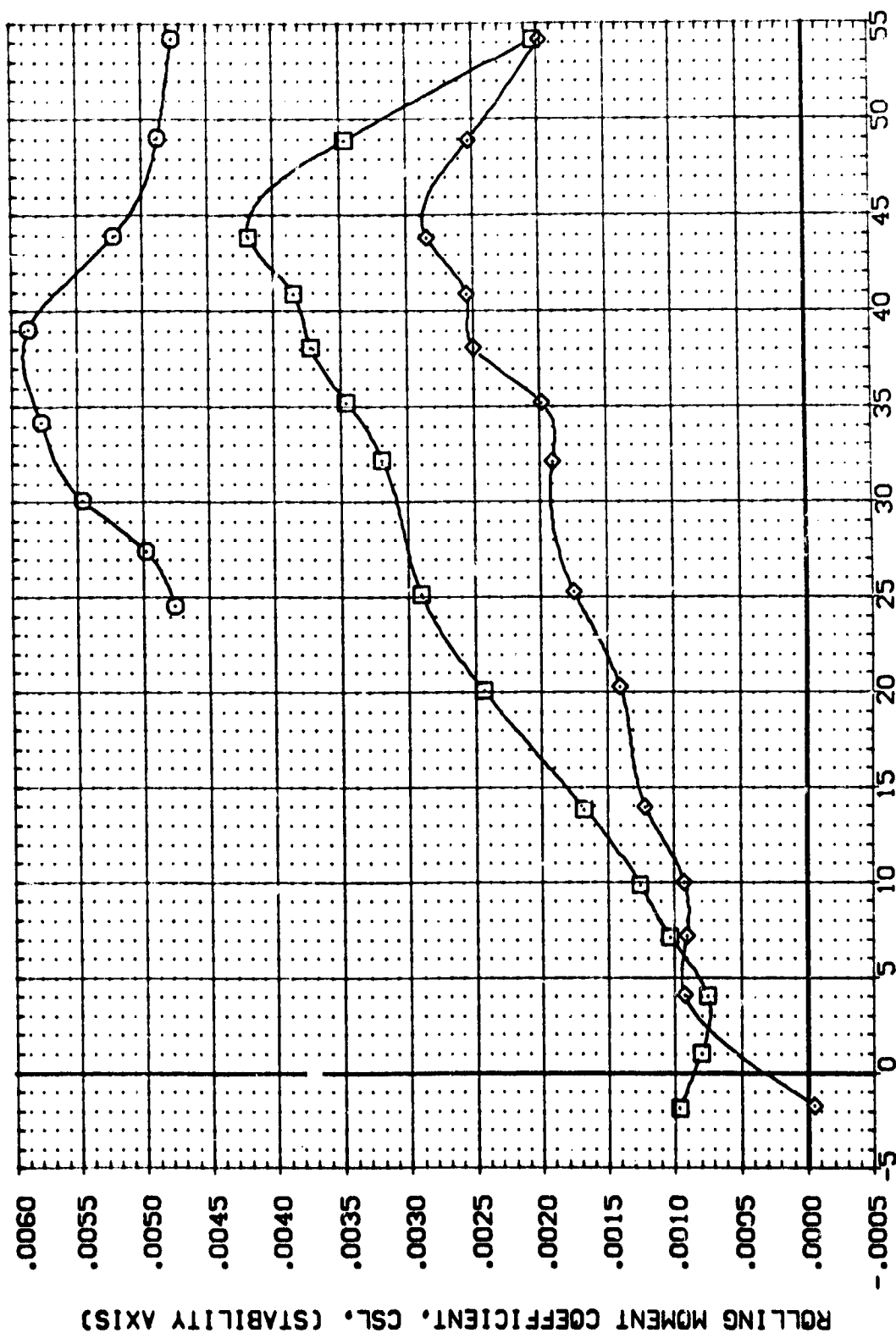


FIG. 7.A LATERAL-DIRECTIONAL EFFECTS OF AILERON CONTROL

(M)MACH = 7.32



DATA SET SYM-CONV-IC-RATION DESCRIPTION

DATA SET SYM	CONV-IC-RATION DESCRIPTION	RUDDER	SPODBRK	BOFLAP	REFERENCE INFORMATION
(GBX030)	AMES 3.5-150 0A11B (B10F4CS07H3N8)(V87E18)(V5RS)	.000	54.920	14.250	SREF 2690.0000 50.F.T.
(GBX016)	AMES 3.5-150 0A11B (B10F4CS07H3N8)(V87E18)(V5RS)	.000	54.920	14.250	LREF 474.8100 IN.
(GBX017)	AMES 3.5-150 0A11B (B10F4CS07H3N8)(V87E18)(V5RS)	.000	54.920	14.250	BREF 936.6800 IN.
					XRRP 1076.4800 IN.
					YRRP .0000 IN.
					ZRRP 400.0000 IN.
					SCALE .0150

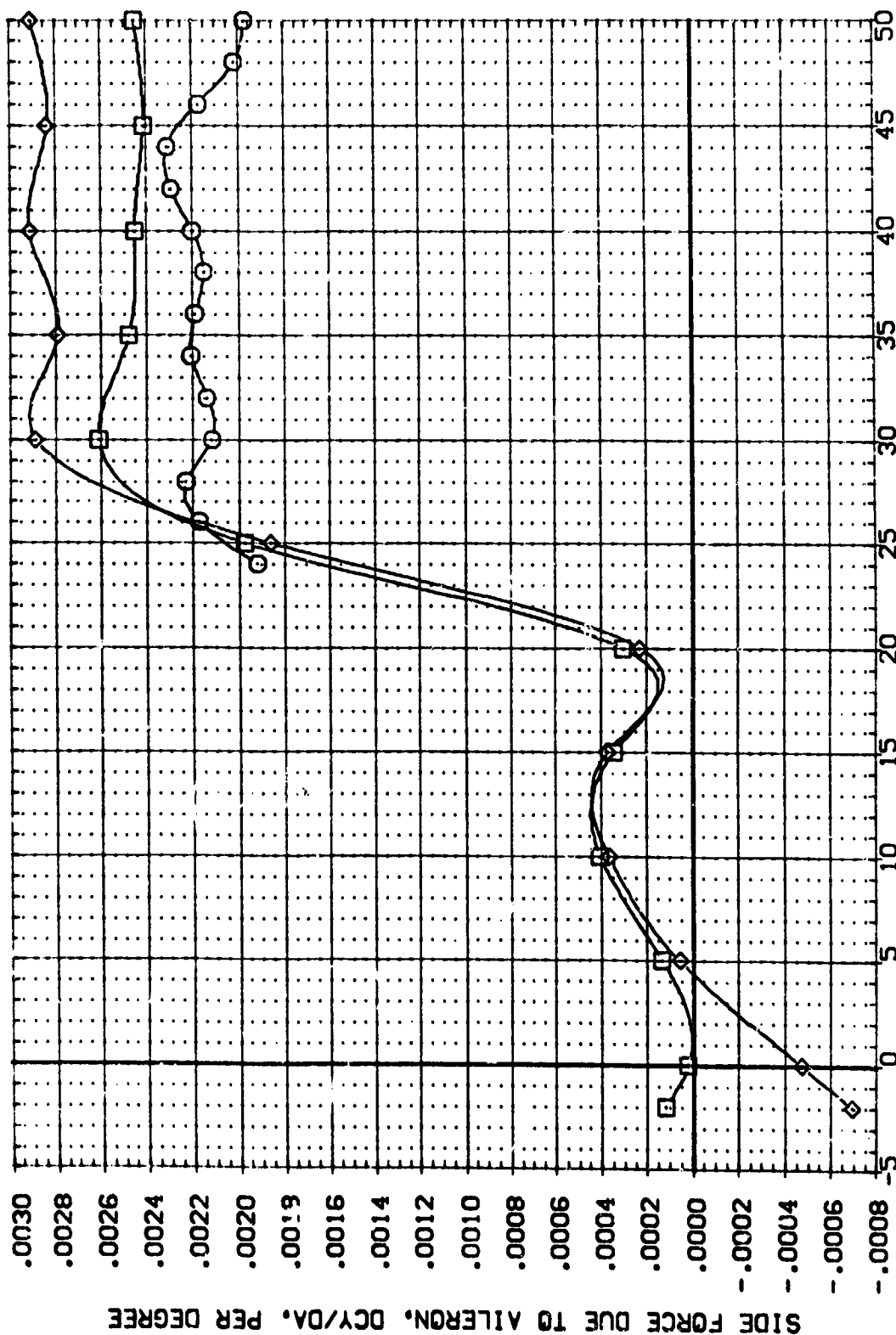


FIG. 7.0 LATERAL-DIRECTIONAL DERIVATIVE EFFECTS OF AILERON CONTROL

(A)MACH = 7.32

(G800030)
 (G80016)
 (G80017)

CONFIGURATION	DESCRIPTION
AMES 3.5-160	CA118 (8) OF 4C507H3N8) (V87E18) (V5RS)
AMES 3.5-160	CA118 (8) OF 4C507H3N8) (V87E18) (V5RS)
AMES 3.5-160	CA118 (8) OF 4C507H3N8) (V87E18) (V5RS)

BLUDDER	SPOBAX	BCFLAP
.000	54.920	-14.250
.000	54.920	-14.250
.000	54.920	-14.250

REFERENCE INFORMATION	
SREF	690.0000 SO.FT.
LREF	474.8100 IN.
BREF	936.5800 IN.
XMRP	1076.6000 IN.
YMRP	0.0000 IN.
ZMRP	400.0000 IN.
SCALE	.0150

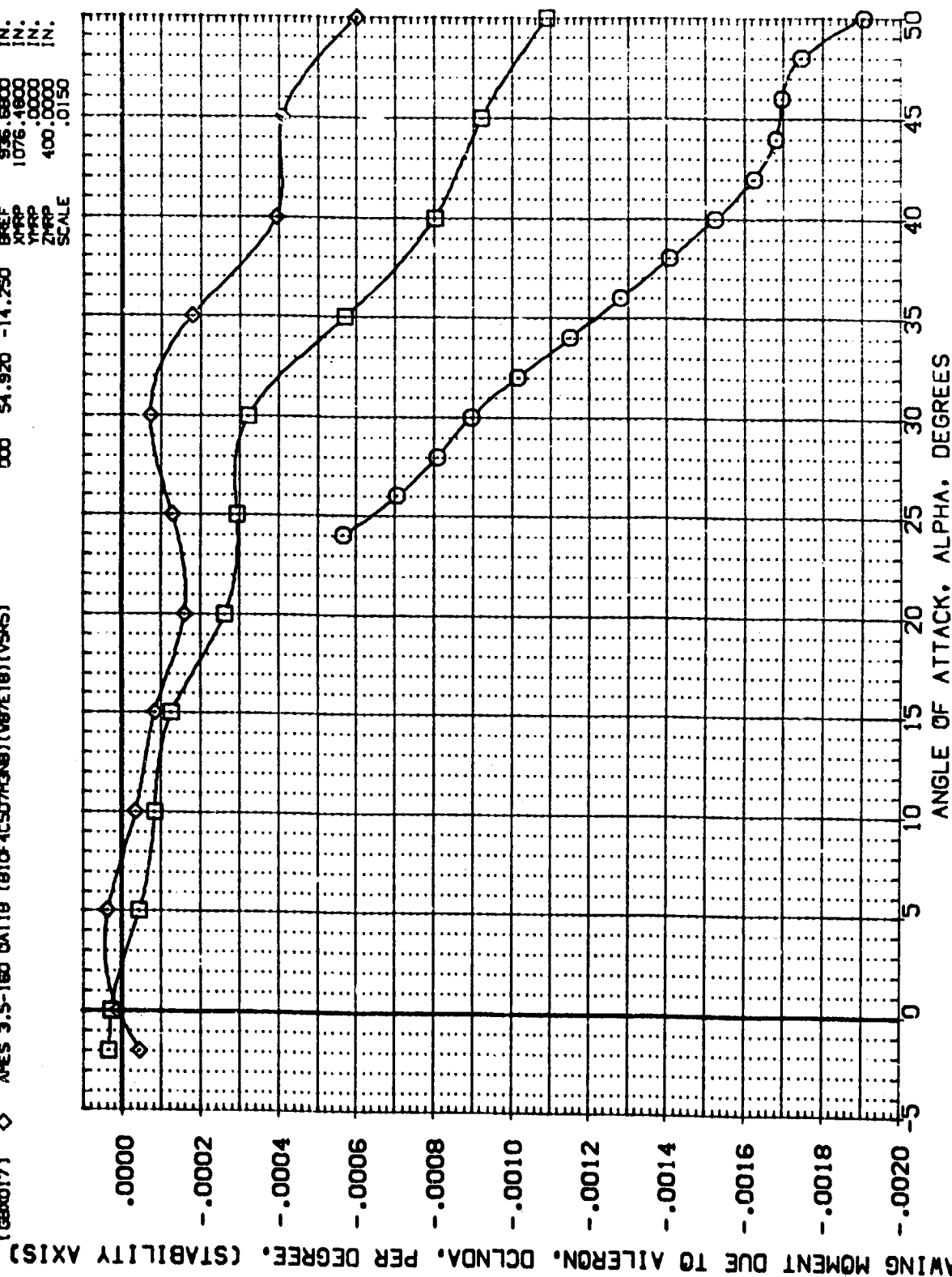


FIG. 7.B LATERAL-DIRECTIONAL DERIVATIVE EFFECTS OF AILERON CONTROL

[A]MACH = 7.32

PAGE 438



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	SPADBRK	BD FLAP	REFERENCE INFORMATION
(GB0030)	AVES 3.5-160 DAI1B (B10F4CS07M3-8)(V67E18)(V5K5)	.000	54.920	-14.250	SREF 2690.0000 50.FT.
(GB0016)	AVES 3.5-160 DAI1B (B10F4CS07M3-8)(V67E18)(V5K5)	.000	54.920	-14.250	LREF 474.8100 IN.
(GB0017)	AVES 3.5-160 DAI1B (B10F4CS07M3-8)(V67E18)(V5K5)	.000	54.920	-14.250	BREF 936.6800 IN.
					XMRP 1076.4800 IN.
					YMRP .0000 IN.
					ZMRP .0000 IN.
					SCALE 400.0000 .0150

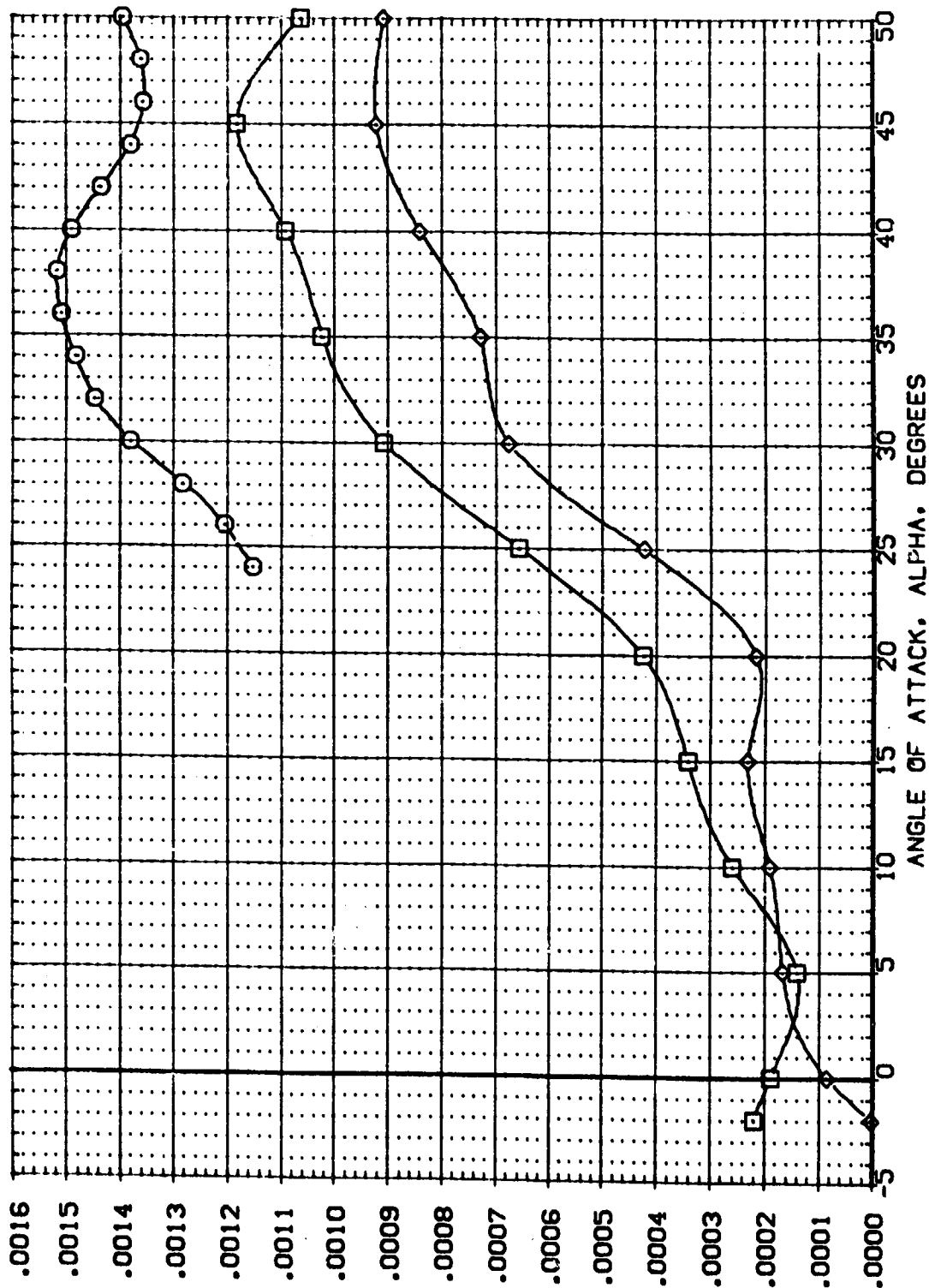


FIG. 7.8 LATERAL-DIRECTIONAL DERIVATIVE EFFECTS OFAILERON CONTROL

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPCRRK	BOFLAP	REFERENCE INFORMATION
(CBX87)	APES 3.5-160 CA11B (810°4C507M348)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000
(B8X859)	APES 3.5-160 CA11B (810°4C507M348)(V88E18)(V5R5)	.000	.000	54.920	-14.350	LREF 474.8100
						BREF 936.6800
						XMRP 1076.4800
						YMRP .0000
						ZMRP 400.0000
						SCALE .0150

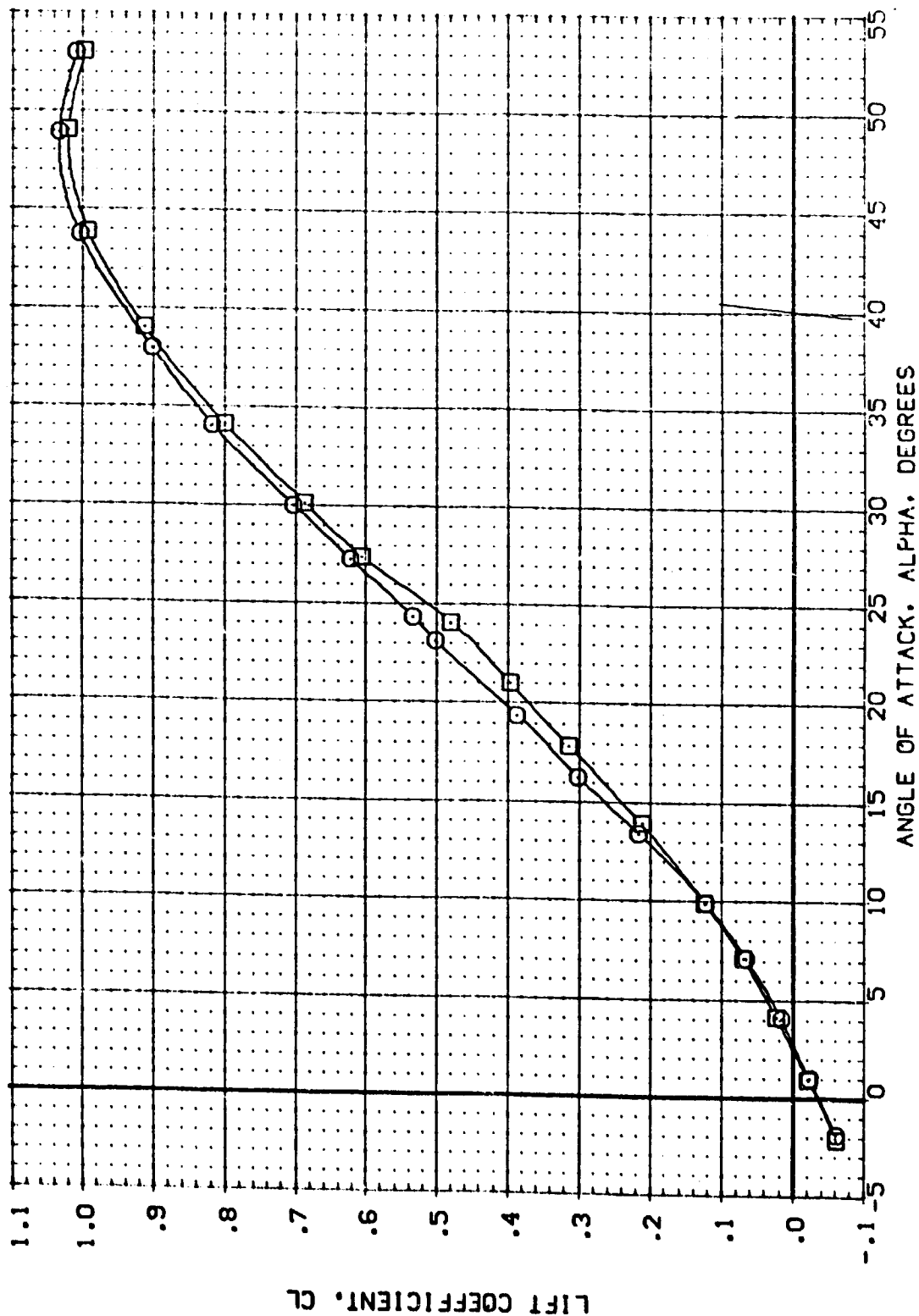


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SP-DRK	BOFLAP	REFERENCE INFORMATION
(29X807)	AYES 3 5-180 CALIB (810F4C507M3-8)(V87E18)(V5RS)	.000	.000	34.920	-14.250	SREF 2690.0000
(29X889)	AYES 3 5-180 CALIB (810F4C507M3-8)(V88E18)(V5RS)	.000	.000	34.920	-14.250	LREF 474.8100
						BREF 336.0900
						XMRP 1076.4000
						VMRP 0000.0000
						ZMRP 400.0000
						SCALE .0150

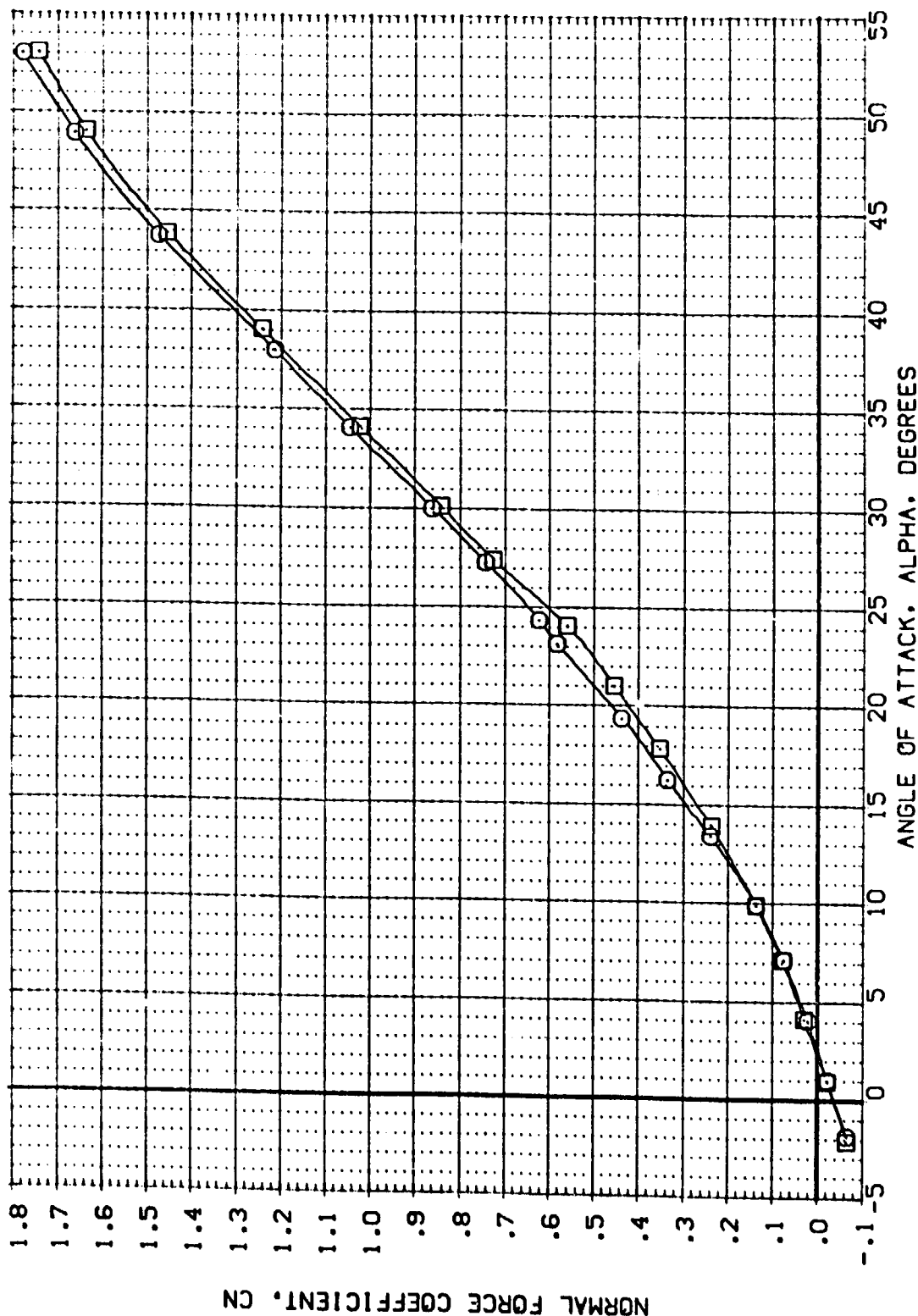


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(A)MACH = 7.32

DATA SET SYMBOL: **CB357** CONFIGURATION DESCRIPTION: **AVES 3.5-160 CALIB (B10F4C507H3A8)(V87E181)(V5K5)**
89A559 **AVES 3.5-160 CALIB (B10F4C507H3A8)(V88E181)(V5K5)**

ELEVON	RJCEA	SPCSBK	BCFLAP	REFERENCE INFORMATION
.000	.000	54.920	-14.250	SREF 2690.0000 SC.FT.
.000	.000	54.920	-14.250	LREF 474.8100
				BREF 935.6800
				XREF 1075.4800
				YREF 1000.0000
				ZREF 400.0000
				SCALE .0150

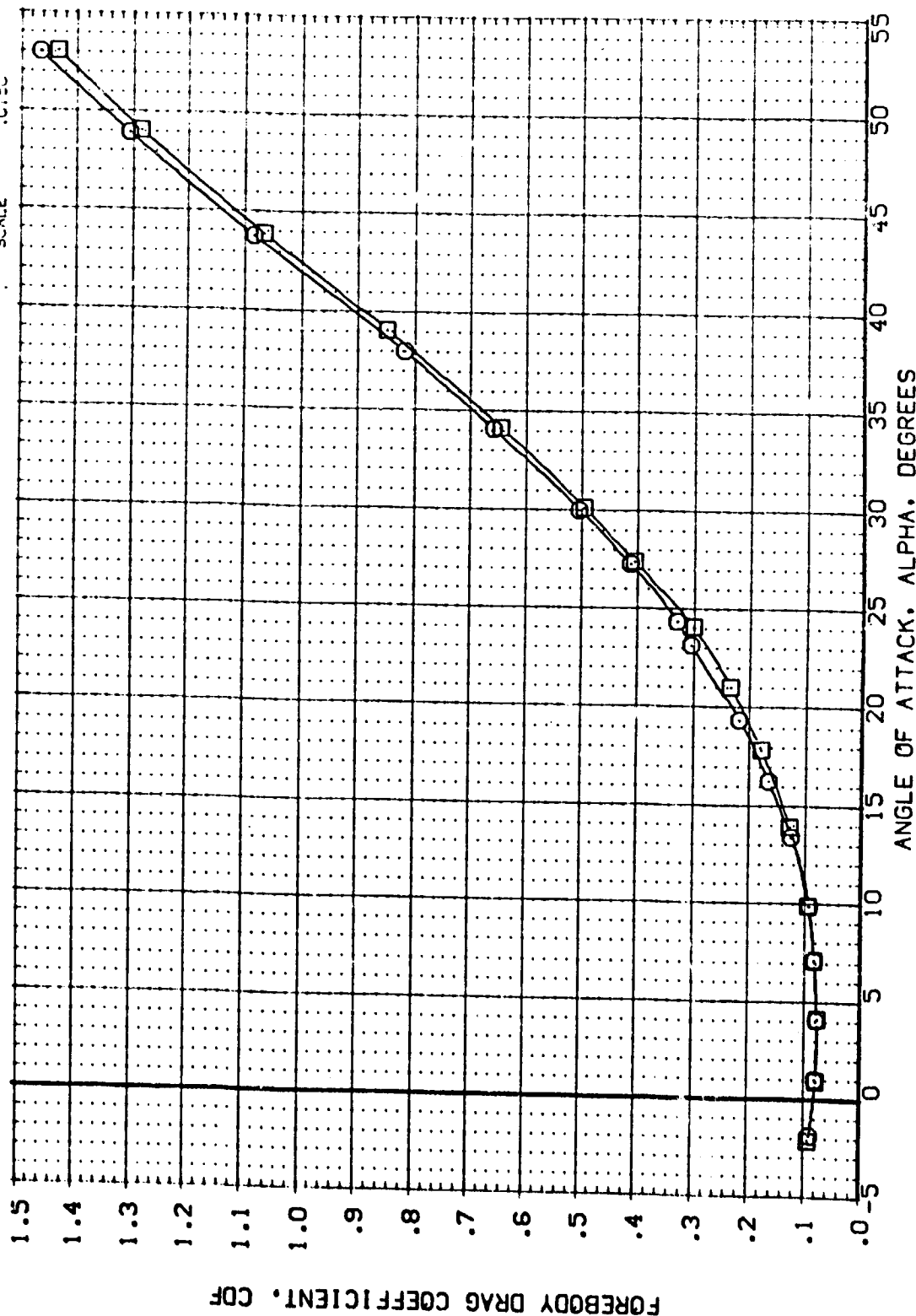


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(A)MACH = 7.32



DATA SET SYMBOL: 18X977
 CONFIGURATION DESCRIPTION: 18X977-180 CA11B (18X977-180) (VSR5)
 18X977-180 CA11B (18X977-180) (VSR5)
 18X977-180 CA11B (18X977-180) (VSR5)

ELEVON: .000
 R-DOOR: .000
 SPOOR: 54.920
 SFLAP: -14.250

REFERENCE INFORMATION:
 SREF: 2690.0000
 LREF: 474.8100
 BREF: 938.8800
 XMRP: 1076.4800
 YMRP: .0000
 ZMRP: .0000
 SCALE: 400.0150

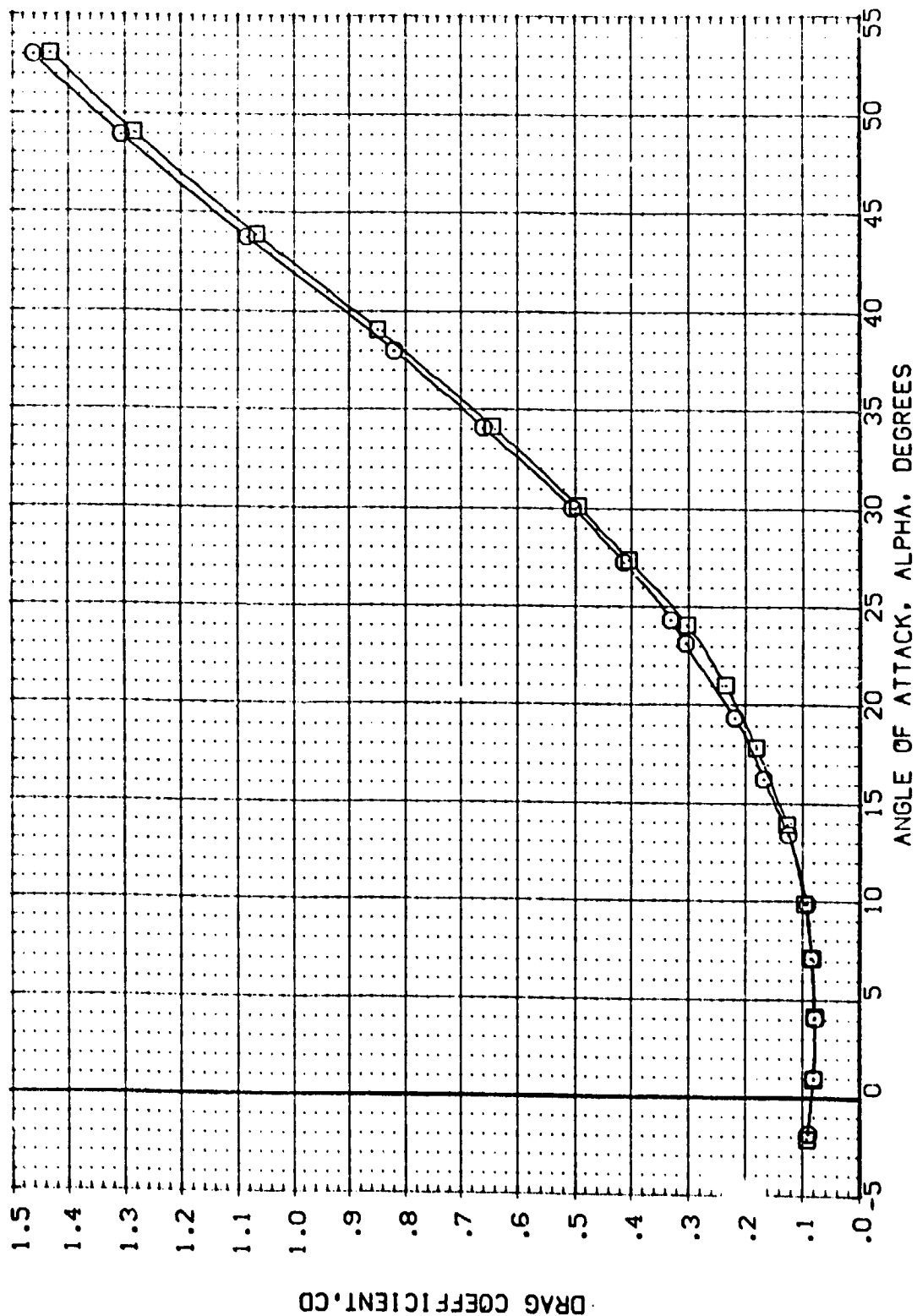


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(MACH = 7.32

DATA SET SYMBOL: CBX037
 CONFIGURATION DESCRIPTION: ASES 3.5-150 CA118 (B1D4C50N3A8)(V87E18)(V5R5)
 BASES: ASES 3.5-150 CA118 (B1D4C50N3A8)(V88E18)(V5R5)

ELEVON: .000
 RUDDER: .000
 SPOILER: 54.920 -14.250
 BOFLAP: 54.920 -14.250

REFERENCE INFORMATION: SC. 1.1
 SREF: 2690.0000
 ZREF: 474.8100
 BREF: 936.6800
 XREF: 1076.6800
 YREF: 1000.0000
 ZREF: 1000.0000
 SCALE: 400.0150

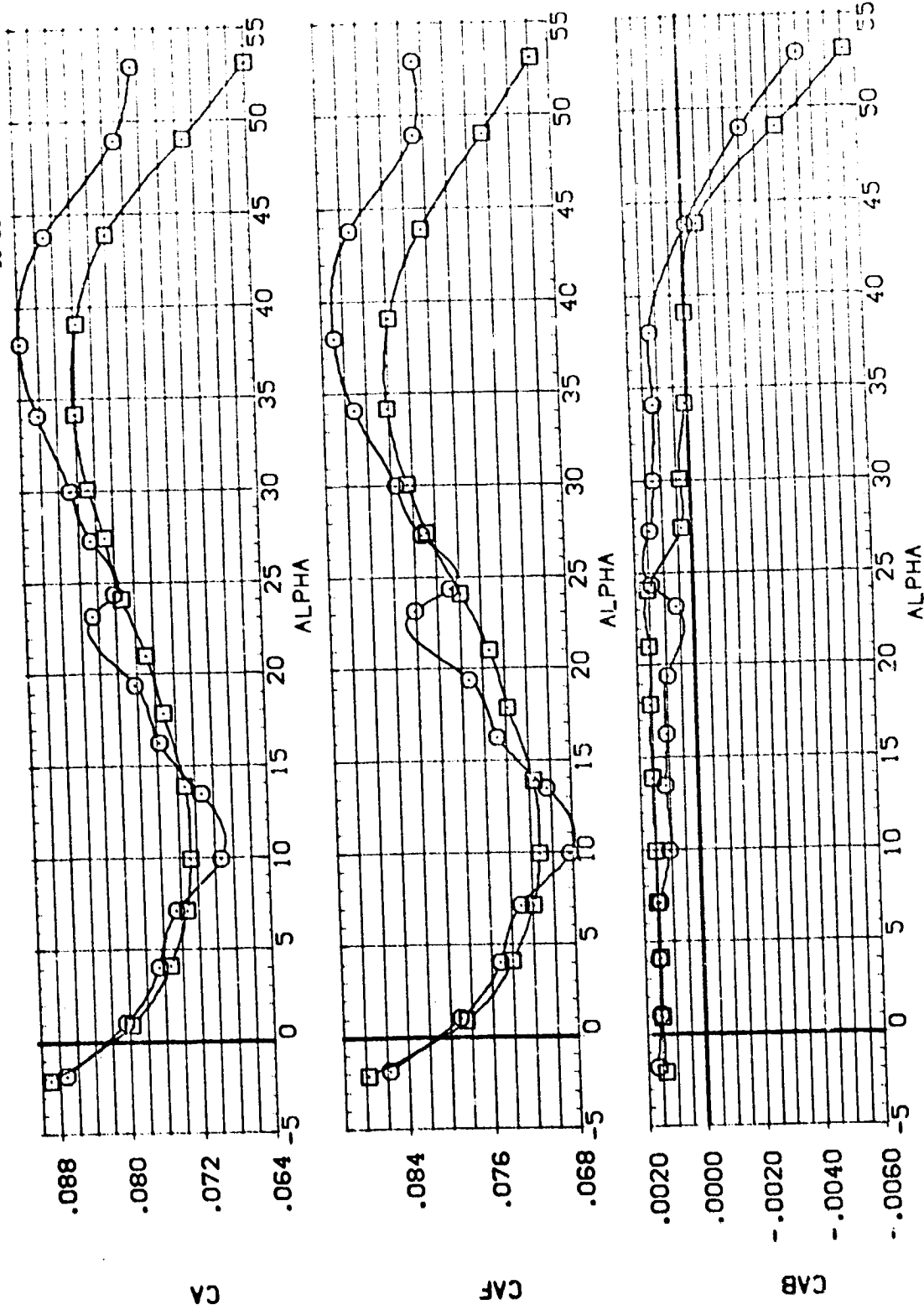


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY
 (A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION
(C9X837)	AVEC (S-190) CALIB (B10F4352) (V87E18) (V5R5)	.000	.000	54.920	-14.250	SREF 2690.0000
(B3X353)	AVEC (S-190) CALIB (B10F4352) (V87E18) (V5R5)	.000	.000	54.920	-14.250	LREF 474.0000
						XMRP 930.9800
						YMRP 1075.4800
						ZMRP .0000
						SCALE 400.0000

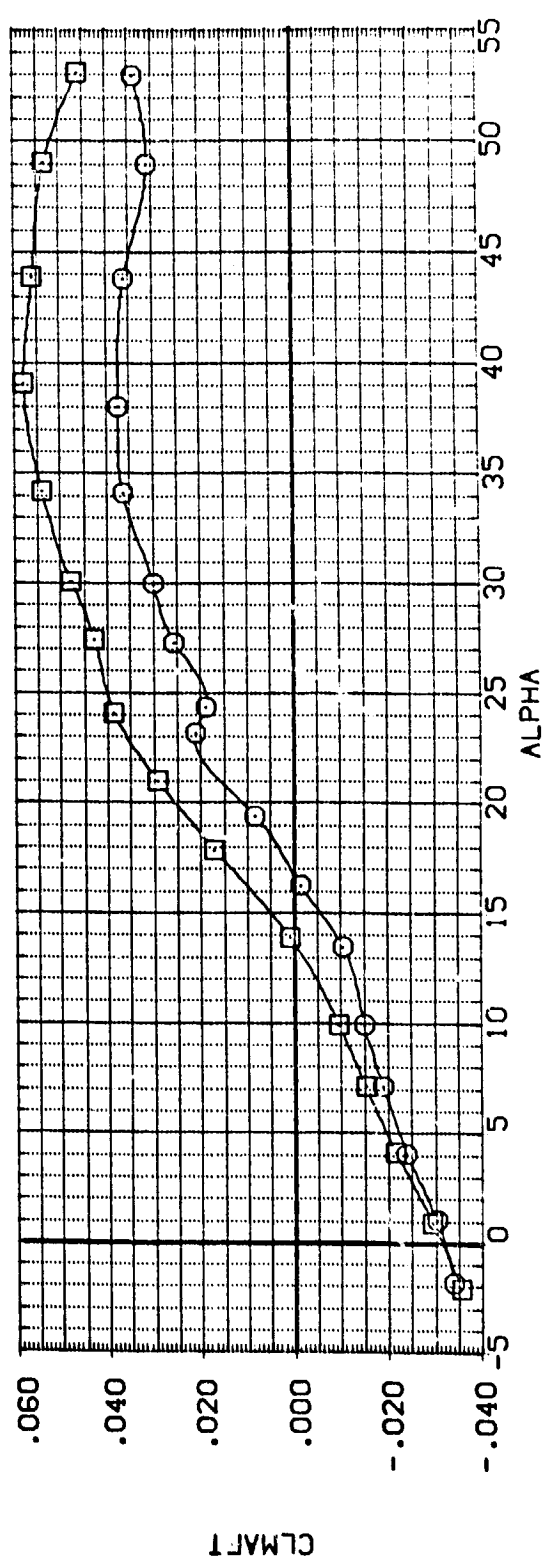
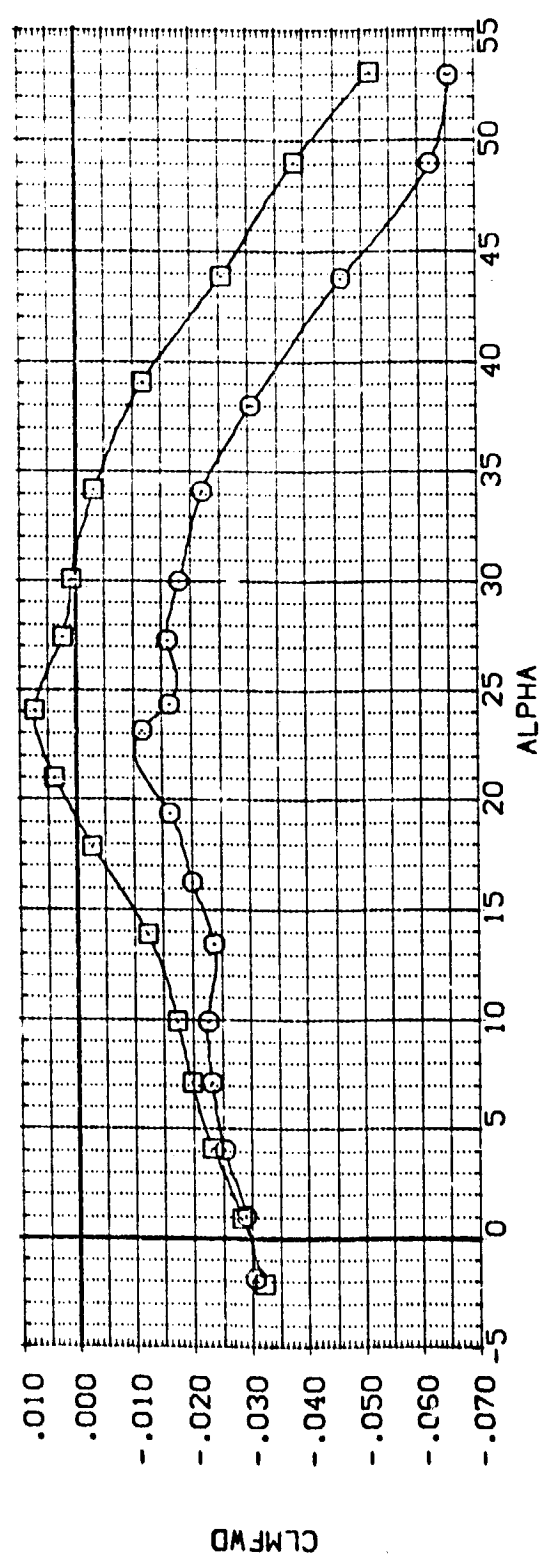


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(A) MACH = 7.32

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	RUDDER	SPOILER	BOFLAP	REFERENCE INFORMATION	
(CBX837)	(B)	AMES 3.5-160	DA11B (B10F4C5D7M3N8)(V87E18)(V5R5)	.000	.000	54.920	-14.250	SREF	2690.0000 SC.FT.
(B9X859)	(B)	AMES 3.5-160	DA11B (B10F4C5D7M3N8)(V88E18)(V5R5)	.000	.000	54.920	-14.250	LREF	474.8100 IN.
								BREF	936.6800 IN.
								XMRP	1076.4800 IN.
								YMRP	400.0000 IN.
								ZMRP	400.0000 IN.
								SCALE	.0150

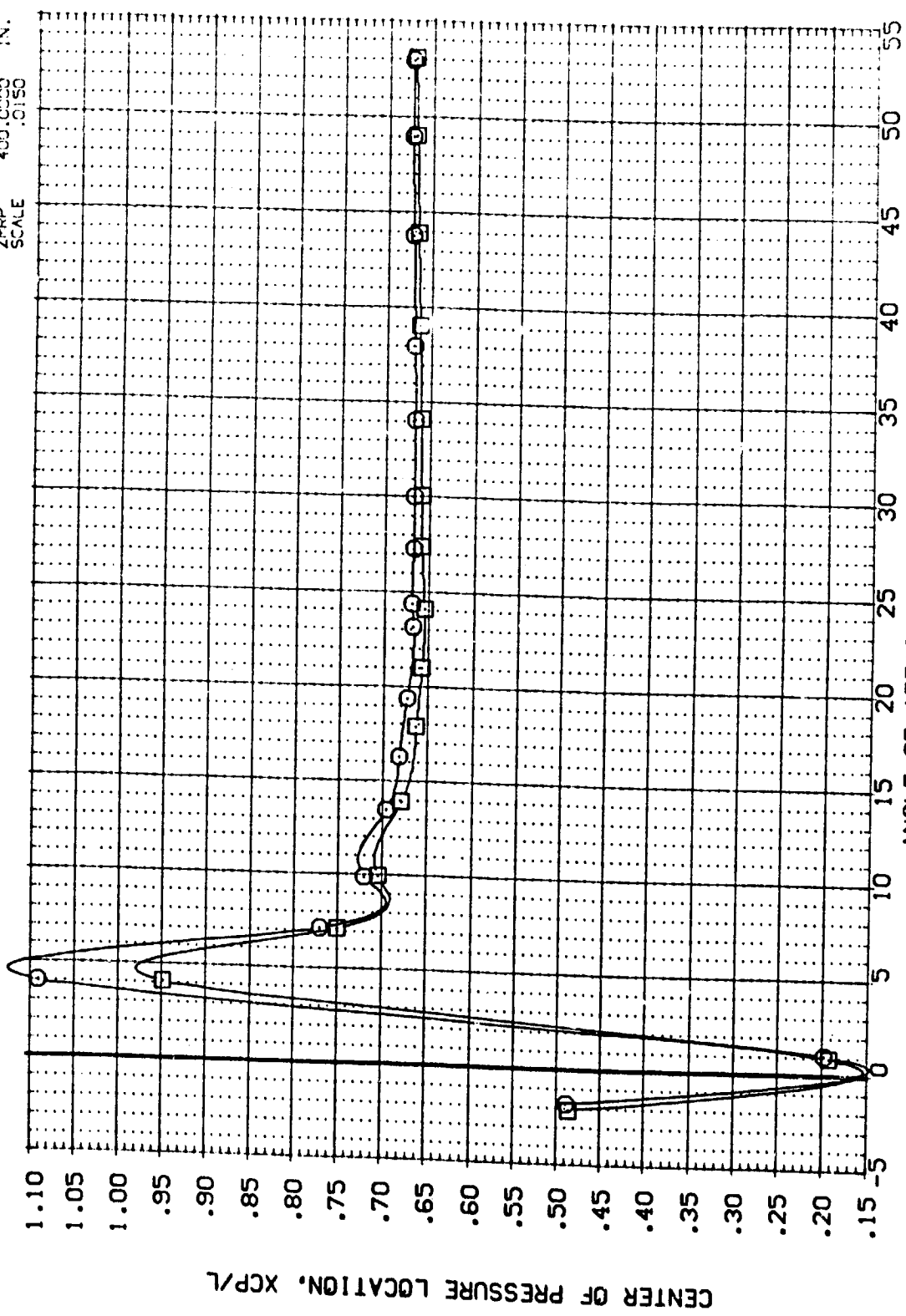
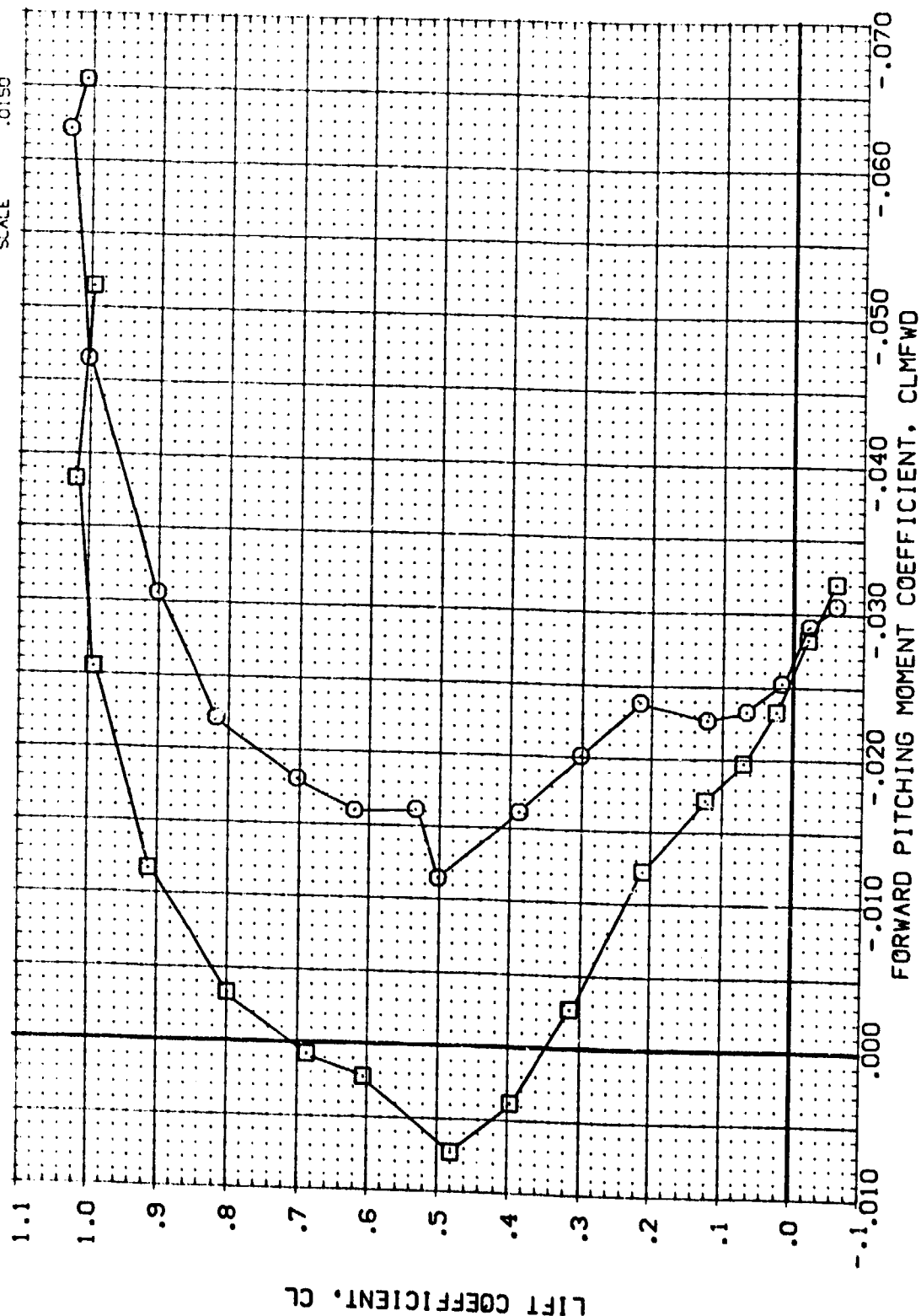


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY
 (A)MACH = 7.32

DATA SET SYMBOL	CONFIGURATION	DESCRIPTION
(CBXBC7)	AVES 3.5-160	CALLIB 1810F4055
(B9X859)	AVES 3.5-160	CALLIB 1810F4055

ELEVON	RUDDER	SFDRK	90FLAP
.000	.000	54.920	-14.250
.000	.000	54.920	-14.250

REFERENCE INFORMATION	
SREF	2690.0000
LREF	474.8100
BREF	935.8000
XMRP	1075.4800
YMRP	0000.0000
ZMRP	400.0000
SCALE	0.150



DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON		RUDDER		SPOILER		BOFLAP		REFERENCE INFORMATION	
(CBX807)	(BBX859)	AMES 3.5-160	CA11B (B10F4C507H3N8)(V87E18)(V5K5)	.000	.000	.000	.000	54.920	-14.250	SREF	2690.0000	SC.FT.	
		AMES 3.5-160	CA11B (B10F4C507H3N8)(V88E18)(V5K5)	.000	.000	.000	.000	54.920	-14.250	LREF	474.8100	IN.	
										BREF	936.6800	IN.	
										XREF	1076.4500	IN.	
										YREF	400.0000	IN.	
										ZREF	400.0000	IN.	
										SCALE	.0150		

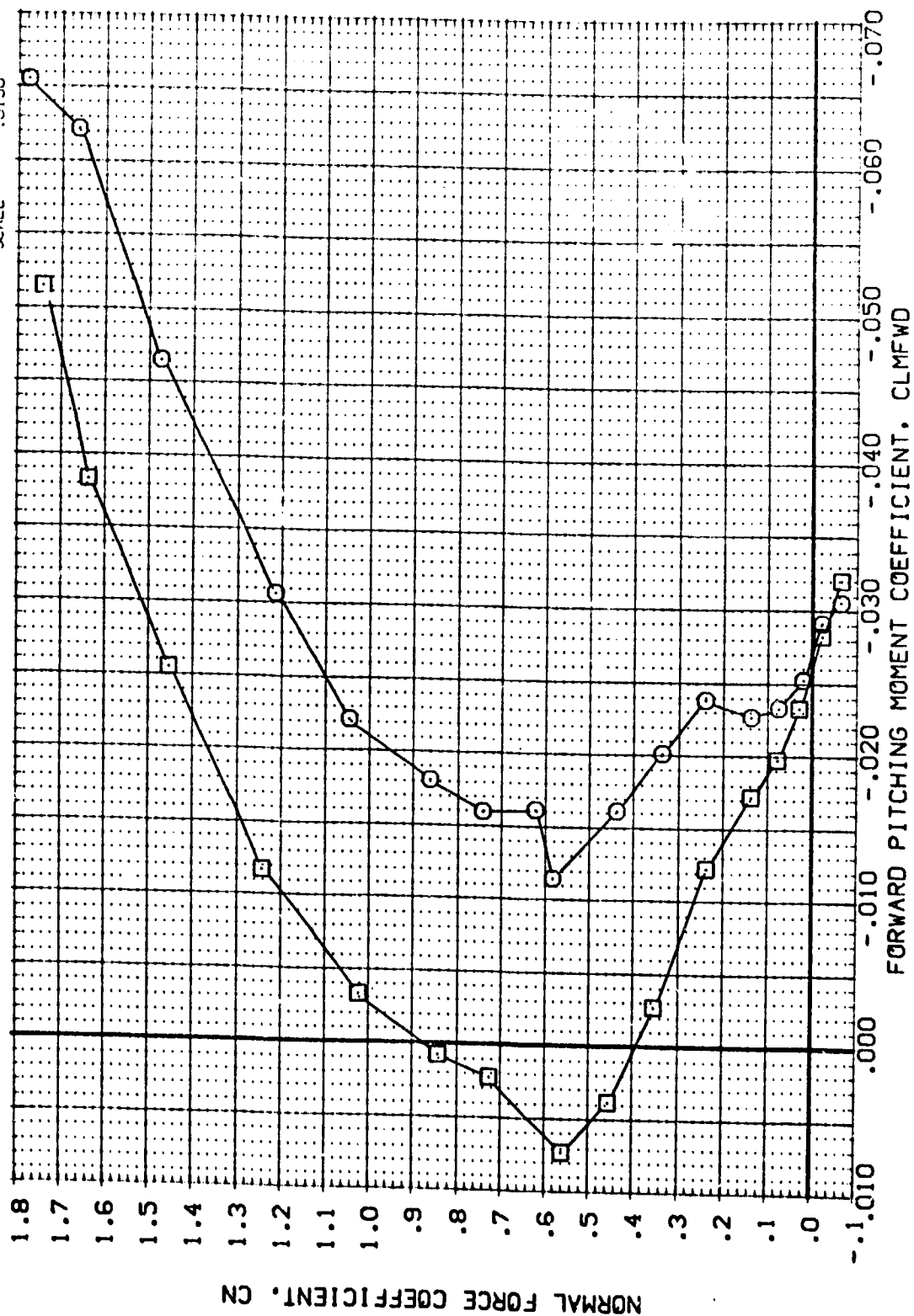


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(A)MACH = 7.32

DATA SET SYMBOL CONFIGURATION DESCRIPTION

AMES 3.5-160 CALL19 (B) OF 455073-8 (V87E18) (V88E18) (V89E18) (V90E18) (V91E18) (V92E18) (V93E18) (V94E18) (V95E18) (V96E18) (V97E18) (V98E18) (V99E18) (V00E18)

AMES 3.5-160 CALL19 (B) OF 455073-8 (V87E18) (V88E18) (V89E18) (V90E18) (V91E18) (V92E18) (V93E18) (V94E18) (V95E18) (V96E18) (V97E18) (V98E18) (V99E18) (V00E18)

REFERENCE INFORMATION

SREF 2690.0000

LREF 474.8000

BREF 936.8000

XMRP 1076.4800

YMRP .0000

ZMRP 400.0000

SCALE .0150

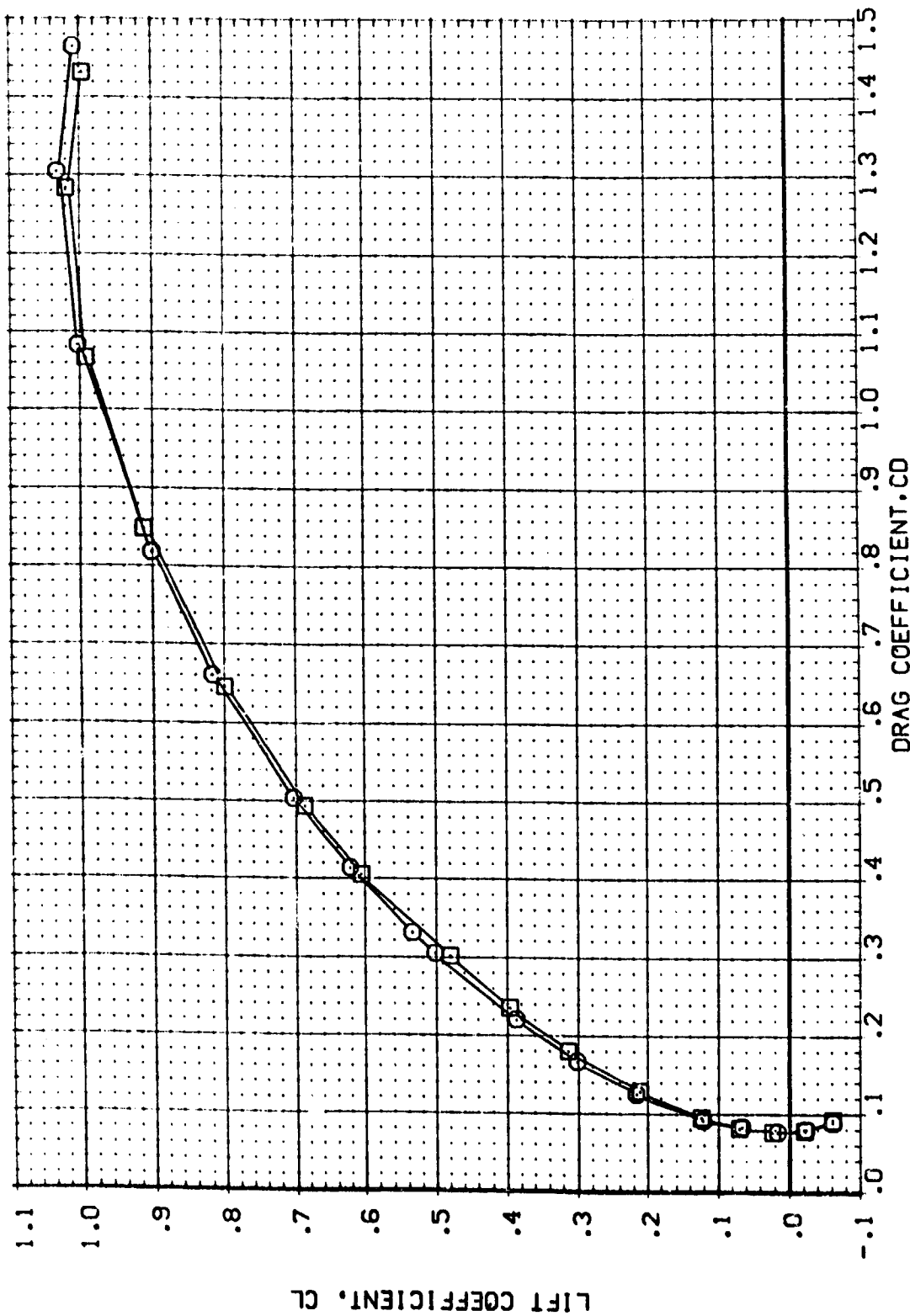


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY

(A) MACH = 7.32

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	RUDDER	SPD BRK	BOFLAP	REFERENCE INFORMATION
(ABRAD7)	AMES 3-5-160 CA11B (810F4C507KNG8)(V87E18)(V8RS)	.000	.000	54.920	-14.250	SREF 2690.0000 SQ.FT.
(ABRAD5)	AMES 3-5-160 CA11B (810F4C507KNG 3)(V88E18)(V8RS)	.000	.000	54.920	-14.250	LREF 474.8100 IN.
						BREF 936.6800 IN.
						XPRP 1076.4800 IN.
						YPRP 400.0000 IN.
						ZPRP 400.0000 IN.
						SCALE .0150

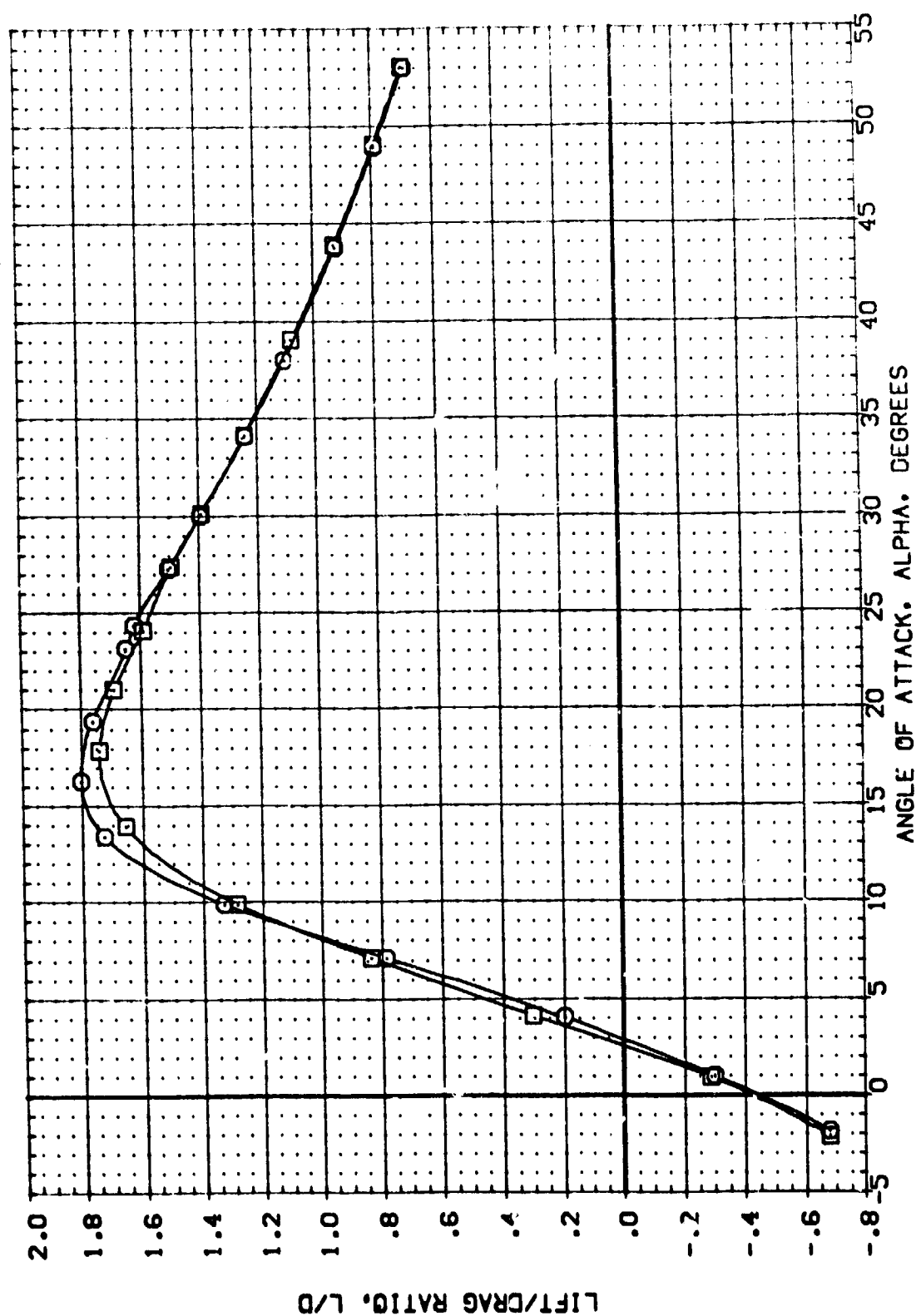


FIG. 8 BASELINE - VS. - SYMMETRICAL WING STUDY
(A)MACH = 7.32

APPENDIX
TABULATED SOURCE DATA

Tabulations of plotted data are available
on request from Data Management Systems.

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 1

AMES 3.5-160 OA118 (810F4C5D7M3N6) (M07E16) (VSR5) (RBX005) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.004	-.08020	.09277	-.03116	.52096	-.07856	.09416	-.00783	-.00368	-.00180	.00106
1.907	-.03606	.06906	-.02799	.39707	-.04067	.08375	-.00903	-.00779	-.00380	.00329
3.814	.00687	.07906	-.02449	1.93492	.00159	.07934	-.00959	-.00668	-.00174	.00368
7.629	.08028	.07812	-.02169	.78664	.04964	.06345	-.01054	-.00892	-.00503	.00324
10.459	.11984	.07903	-.02113	.72502	.10426	.09550	-.01126	-.00922	-.00558	.00321
GRADIENT	.01777	-.00263	.00137	.26566	.01633	-.00312	-.00041	-.00063	-.00065	.00060

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.50 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
9.154	.12253	.07286	-.02286	.72676	.10937	.09145	-.01454	-.01368	-.01219	-.01807
13.872	.22030	.07075	-.02104	.69413	.19691	.12150	-.01550	-.01452	-.01280	-.01535
17.015	.31672	.07346	-.01826	.68063	.28136	.16295	-.01810	-.01525	-.01275	-.01308
20.140	.41669	.07640	-.01508	.67266	.36697	.21596	-.01622	-.01594	-.01209	-.00924
24.167	.56130	.07913	-.01258	.66800	.47970	.30199	-.01642	-.01631	-.01224	.00747
GRADIENT	.02948	.00048	.00072	-.00368	.02497	.01407	-.00013	-.00016	.00001	.00159

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

AMES 3.5-160 OA118 (810F4C5D7M3N6) (M07E16) (VSR5) (RBX006) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR Q118 (ARC 3.5-180)

PAGE 2

AVES 3.5-180 Q118 (B10F4C507M08) (NOTE18) (VRS9)

(RBX007) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. 100P = 1076.4800 IN.
 LREF = 474.8100 IN. 100P = .0000 IN.
 BREF = 936.6000 IN. 200P = 400.0000 IN.
 SCALE = .0190

RM/L = 2.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.822	-.08372	.08733	-.03049	.48893	-.08091	.08932	-.01443	-.01443	-.01493	-.01499
1.007	-.02248	.08046	-.02907	.19784	-.02390	.08007	-.01484	-.01484	-.01484	-.01326
4.017	.02094	.07662	-.02320	1.09014	.01552	.07790	-.01481	-.01474	-.01474	-.01279
7.102	.07532	.07443	-.02326	.77042	.08954	.08317	-.01487	-.01437	-.01347	-.01176
9.996	.13743	.07394	-.02342	.72091	.12257	.09659	-.01510	-.01454	-.01378	-.01022
GRADIENT	.01450	-.00183	.00091	.10900	.01308	-.00194	-.00008	.00005	.00037	.00070

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPODRK = 54.920 BOFLAP = -14.230
 ELEVON = .000 AILRON = .000

AVES 3.5-180 Q118 (B10F4C507M08) (NOTE18) (VRS9)

(RBX008) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. 100P = 1076.4800 IN.
 LREF = 474.8100 IN. 100P = .0000 IN.
 BREF = 936.6000 IN. 200P = 400.0000 IN.
 SCALE = .0190

RM/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
9.974	.13584	.08932	-.02282	.71954	.12194	.09159	-.00874	-.00900	-.00883	-.01289
13.421	.23929	.07137	-.02364	.83557	.21648	.12903	-.01027	-.00982	-.00970	-.01306
16.242	.33494	.07576	-.02008	.66142	.30036	.16642	-.01039	-.01002	-.00818	-.01112
19.397	.43721	.07818	-.01814	.67319	.38612	.21895	-.01049	-.01031	-.00779	-.00818
23.132	.56199	.08273	-.01140	.66999	.50259	.30489	-.01067	-.01075	-.00740	-.00519
GRADIENT	.03354	.00103	.00093	-.00390	.02864	.01605	-.00015	-.00012	.00012	.00127

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPODRK = 54.920 BOFLAP = -14.230
 ELEVON = .000 AILRON = .000

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 3

AMES 3.5-160 OA118 (B10F4C5D7M3N6) (M07E10) (V9R5)

(RBX009) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

RN/L = 2.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-2.269	-.10725	.10696	-.00350	.64832	-.10290	.11116	-.01099	-.01146	-.01160	-.01393
.982	-.05440	.09252	-.00766	.60830	-.05595	.09159	-.01129	-.01139	-.01183	-.01340
4.047	-.00569	.06800	-.00767	.17794	-.01174	.06956	-.01159	-.01129	-.01170	-.01446
7.067	.04755	.06070	-.00754	.71669	.03726	.08134	-.01199	-.01194	-.01144	-.01482
9.912	.11063	.07749	-.00697	.68250	.09564	.09556	-.01276	-.01266	-.01126	-.01504
GRADIENT	.01613	-.00332	-.00066	-.07369	.01439	-.00409	-.00009	.00003	-.00002	-.00010

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

AMES 3.5-160 OA118 (B10F4C5D7M3N6) (M07E10) (V9R5)

(RBX010) (29 MAR 74)

RN/L = 2.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
9.680	.11221	.07583	-.00736	.64850	.09756	.09392	-.01580	-.01660	-.01561	-.02018
13.606	.21351	.07663	-.00527	.66862	.18903	.12357	-.01687	-.01680	-.01566	-.02056
16.932	.30449	.07916	.00195	.65770	.26852	.16345	-.01661	-.01667	-.01445	-.02007
20.052	.40352	.08252	.01180	.64953	.35145	.21399	-.01665	-.01665	-.01404	-.01699
24.077	.55910	.08440	.02221	.64526	.45777	.29699	-.01694	-.01735	-.01487	-.01265
GRADIENT	.03010	.00061	.00219	-.00275	.02545	.01426	-.00006	-.00003	.00009	.00047

DATE 01 APR 74

TABULATED SOURCE DATA FOR Q4118 (ARC 3.5-100)

PAGE 4

AMES 3.5-100 Q4118 (810F4C507H048) (M07E10) (VSR5)

REFERENCE DATA

SREF = 2090.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.6100 IN. YREF = .0000 IN.
 BREF = 936.6600 IN. ZREF = 400.0000 IN.
 SCALE = .0190

RM/L = 2.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.936	-.06372	.09200	-.03765	.44766	-.08056	.08410	-.01857	-.01856	.01861	-.05011
.935	-.01817	.08457	-.03676	-.06323	-.01958	.08426	-.01825	-.01835	-.01832	-.01966
3.969	.03196	.06142	-.03596	1.06220	.02625	.06344	-.01807	-.01797	-.01759	-.01973
7.020	.08253	.07919	-.03912	.81115	.06216	.08991	-.01796	-.01829	-.01729	-.01863
9.881	.16319	.07827	-.04223	.75907	.14734	.10511	-.01811	-.01829	-.01698	-.02001
GRADIENT	.01821	-.00179	.00032	.10600	.01471	-.00179	.00006	.00010	.00024	.00006

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 SOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

(R8X011) (29 MAR 74)

AMES 3.5-100 Q4118 (810F4C507H048) (M07E10) (VSR5)

REFERENCE DATA

SREF = 2090.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.6100 IN. YREF = .0000 IN.
 BREF = 936.6600 IN. ZREF = 400.0000 IN.
 SCALE = .0190

RM/L = 2.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
9.664	.16371	.08080	-.04596	.75916	.14964	.10716	-.01843	-.01954	-.01872	-.02101
13.028	.28666	.08327	-.05644	.73034	.26028	.14772	-.01832	-.01867	-.01807	-.02067
16.093	.39329	.08925	-.06327	.71751	.35314	.19477	-.01778	-.01821	-.01742	-.02014
19.265	.51397	.09297	-.07393	.71142	.45353	.26016	-.01774	-.01832	-.01711	-.01978
23.064	.67796	.10637	-.08920	.70703	.58210	.36346	-.01777	-.01831	-.01674	-.01572
GRADIENT	.03754	.00190	-.00316	-.00370	.03214	.01901	.00006	.00006	.00015	.00035

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 SOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

(R8X012) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR 0411B (ARC 3.5-160)

PAGE 5

AVES 3.5-160 0411B (B10F4C50743M6) (M07E18) (VSR5)

(RBX013) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

MACH = 7.320

RM/L = 1.73 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = .000 ELWN-L = .000
 ELWN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = 13.750
 ELEVON = .000 AILRON = .000

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.866	-.06617	.09022	-.03374	.48301	-.06519	.09239	-.01792	-.01750	-.01767	-.01867
.955	-.02636	.06229	-.03129	.23592	-.02774	.08163	-.01750	-.01722	-.01652	-.01813
3.934	.01980	.07647	-.02743	1.15516	.01437	.07964	-.01747	-.01719	-.01629	-.01832
7.010	.07583	.07571	-.02674	.76606	.06602	.06440	-.01749	-.01722	-.01760	-.01880
9.888	.13947	.07500	-.02617	.73221	.12452	.09764	-.01754	-.01744	-.01731	-.01931
13.621	.25172	.07676	-.03156	.70464	.22609	.13469	-.01750	-.01736	-.01754	-.01959
17.861	.38547	.08075	-.03314	.69073	.34215	.19520	-.01749	-.01743	-.01667	-.01876
21.047	.50226	.08607	-.03650	.68739	.43766	.26072	-.01742	-.01753	-.01641	-.01822
24.156	.62359	.09137	-.04501	.68560	.53159	.33656	-.01701	-.01727	-.01533	-.01562
GRADIENT	.01517	-.00202	.00109	.11768	.01372	-.00216	.00001	.00005	-.00011	.00006

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

AVES 3.5-160 0411B (B10F4C50743M6) (M07E18) (VSR5)

(RBX014) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 ELWN-L = .000
 ELWN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = .000
 ELEVON = .000 AILRON = .000

RM/L = 1.63 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.901	-.06625	.08963	-.03179	.46832	-.06324	.09178	-.01621	-.01626	-.01749	-.01755
.955	-.02495	.08091	-.02895	.24510	-.02629	.08048	-.01607	-.01613	-.01766	-.01719
3.987	.02109	.07771	-.02572	1.09594	.01564	.07899	-.01665	-.01628	-.01790	-.01801
7.031	.07532	.07498	-.02475	.77749	.06557	.08363	-.01681	-.01644	-.01739	-.01810
9.835	.13723	.07584	-.02521	.72567	.12260	.09619	-.01721	-.01666	-.01707	-.01863
13.491	.24463	.07431	-.02535	.69701	.22074	.12938	-.01737	-.01696	-.01697	-.01920
17.176	.37473	.07779	-.02176	.68075	.33504	.18499	-.01759	-.01697	-.01666	-.01866
20.366	.46449	.08028	-.01923	.67416	.42626	.24369	-.01714	-.01697	-.01643	-.01801
23.493	.59684	.08349	-.01977	.67179	.51592	.31929	-.01696	-.01697	-.01547	-.01509
GRADIENT	.01484	-.00201	.00103	.10499	.01340	-.00215	-.00006	-.00000	-.00007	-.00006

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 6

AVES 3.5-160 OA118 (B10F4C5D7M3N8) (N87E16) (VSR5)

(R8X018) (29 MAR 74)

REFERENCE DATA

SKEW = 2990.0000 SQ.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CA	CLM	KCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.945	.08946	-.02903	.51483	-.06842	.09183	-.01599	-.01629	-.01741	-.01744
.937	.08139	-.02760	.31853	-.03023	.08090	-.01631	-.01644	-.01771	-.01749
3.943	.07790	-.02442	1.18767	.01115	.07885	-.01628	-.01634	-.01830	-.01786
6.966	.07504	-.02244	.77483	.06024	.06296	-.01649	-.01627	-.01775	-.01816
9.686	.07305	-.02173	.71817	.11901	.08490	-.01718	-.01685	-.01765	-.01912
13.674	.07265	-.02027	.69015	.21584	.12814	-.01721	-.01695	-.01888	-.01948
17.885	.07561	-.01467	.67433	.32485	.18426	-.01718	-.01706	-.01683	-.01944
21.049	.07881	-.00993	.66751	.41244	.24317	-.01717	-.01637	-.01637	-.01885
24.147	.08235	-.00773	.66469	.50346	.31596	-.01718	-.01722	-.01615	-.01989
GRADIENT	-.00196	.00076	.11551	.01351	-.00219	-.00005	-.00001	-.00015	-.00005

BETA = .000 ELVN-L = 5.000
 ELVN-R = -15.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -5.000 AILRON = 10.000

PARAMETRIC DATA

REFERENCE DATA

SKEW = 2990.0000 SQ.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CA	CLM	KCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.971	.08649	-.02333	.54436	-.06928	.06880	-.01283	-.01307	-.01256	-.01464
.963	.07682	-.02210	.37381	-.02894	.07813	-.01345	-.01363	-.01354	-.01435
4.044	.07497	-.01847	1.09566	.00983	.07985	-.01350	-.01358	-.01329	-.01449
7.088	.06847	-.01699	.75139	.03697	.08050	-.01363	-.01359	-.01488	-.01510
9.880	.07296	-.01857	.70774	.10978	.09313	-.01390	-.01374	-.01492	-.01536
13.647	.07385	-.01313	.66041	.20560	.12675	-.01434	-.01426	-.01414	-.01454
20.057	.07813	.00084	.65945	.37217	.21908	-.01416	-.01455	-.01356	-.01533
25.109	.08207	.00915	.65453	.50625	.32862	-.01431	-.01494	-.01388	-.01149
29.025	.08542	.01169	.65440	.61214	.43756	-.01387	-.01449	-.01276	-.00735
GRADIENT	-.00194	.00063	.08492	.01337	-.00217	-.00011	-.00009	.00005	.00002

BETA = .000 ELVN-L = -5.000
 ELVN-R = -15.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -10.000 AILRON = 5.000

PARAMETRIC DATA

AVES 3.5-160 OA118 (B10F4C5D7M3N8) (N87E16) (VSR5)

(R8X016) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 7

AMES 3.5-160 OA11B (B10F4C5D7M3N8) (M07E18) (V5R5)

(RBX017) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 PREF = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.11 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = .000 ELVN-L = -15.000
 ELVN-R = -25.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -20.000 AILRON = 5.000

MACH = 7.320	ALPHA	CN	CA	CLM	KC/L	CL	CD	CP1	CP2	CP3	CP4
	-1.747	-.07326	.09055	-.02561	.53502	-.07048	.09274	-.01362	-.01475	-.01465	-.01503
	-1.734	.00589	-.00033	-.00251	.81254	.00587	-.00071	-.00611	-.00685	-.00555	-.00736
	4.063	.01731	.07791	-.02084	1.09031	.01172	.07695	-.01395	-.01472	-.01525	-.01571
	7.159	.06690	.07504	-.01934	.75360	.05902	.08304	-.01412	-.01473	-.01479	-.01622
	9.999	.12918	.07420	-.01564	.70382	.11433	.09251	-.01452	-.01479	-.01505	-.01700
	13.949	.23100	.07495	-.01058	.67636	.20612	.12842	-.01500	-.01530	-.01525	-.01767
	20.256	.42219	.07908	.02611	.65482	.36870	.22036	-.01490	-.01541	-.01365	-.01736
	25.264	.59402	.06334	.01603	.65034	.50151	.32907	-.01493	-.01579	-.01433	-.016.9
	29.124	.73743	.08660	.02173	.64945	.67205	.43456	-.01441	-.01500	-.01324	-.01254
GRADIENT		.03676	.00562	-.00116	.07161	.00756	.00563	-.00066	-.00067	-.00068	-.00070

AMES 3.5-160 OA11B (B10F4C5D7M3N8) (M07E18) (V5R5)

(RBX018) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 PREF = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -20.000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

RN/L = 2.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	CN	CA	CLM	KC/L	CL	CD	CP1	CP2	CP3	CP4
	-1.751	-.06680	.09199	-.02710	.51673	-.06576	.09404	-.01117	-.01430	-.0.496	-.01524
	1.077	-.02325	.08397	-.02492	.50712	-.02683	.08346	-.01078	-.01449	-.01356	-.01499
	4.057	.01780	.07999	-.02122	1.09635	.01209	.08105	-.01086	-.01412	-.01551	-.01490
	7.108	.07223	.07703	-.02006	.75929	.08215	.08356	-.01190	-.01360	-.01432	-.01540
	10.005	.13614	.07732	-.02136	.71613	.12082	.09822	-.01319	-.01470	-.01369	-.01604
	13.953	.24194	.07634	-.02064	.69049	.21639	.13243	-.01363	-.01497	-.01354	-.01616
	18.036	.37083	.07691	-.01566	.67509	.32617	.18966	-.01385	-.01501	-.01468	-.01618
	21.191	.47847	.06116	-.01170	.66873	.41677	.24863	-.01427	-.01536	-.01380	-.01536
	24.274	.59179	.08423	-.01050	.66633	.50464	.32007	-.01439	-.01544	-.01328	-.01235
GRADIENT		.01467	-.00206	.00101	.09918	.01340	-.00222	.00005	.00003	-.00009	.00006

DATE 04 APR 74

PAGE 8

TABULATED SOURCE DATA FOR OA11B (ABC 3.5-180)

(R8R019) (29 MAR 74)

AMES 3.5-180 OA11B (B10F4C907M5N6) (N07E16) (V5R5)

REFERENCE DATA

REF = 2090.0000 50.0 FT. 146P = 1076.4000 IN.
 LREF = 474.8100 IN. 146P = .0000 IN.
 BREF = 936.6000 IN. 246P = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELWN-L = .000
 ELWN-R = .000 RUDDER = -10.000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 ALLRON = .000

RN/L = 1.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.849	-0.0964	0.0919	-0.05048	.50393	-0.0693	.09335	-0.01516	-0.01792	-0.01649	-0.01792	-0.01775
1.000	-0.0561	0.0814	-0.02811	.26745	-0.0711	.08266	-0.01597	-0.01807	-0.01622	-0.01807	-0.01770
3.998	0.01927	0.07824	-0.02434	1.11162	.01367	.08039	-0.01591	-0.01730	-0.01606	-0.01730	-0.01775
7.010	0.07312	0.07621	-0.02299	.77239	.06321	.09790	-0.01622	-0.01709	-0.01622	-0.01709	-0.01764
9.905	0.13765	0.07524	-0.02281	.71922	.12256	.09790	-0.01649	-0.01691	-0.01633	-0.01691	-0.01876
13.865	0.24233	0.07600	-0.02218	.69271	.21701	.13193	-0.01657	-0.01622	-0.01568	-0.01622	-0.01865
17.961	0.37327	0.07696	-0.01708	.67835	.35082	.19041	-0.01586	-0.01362	-0.01568	-0.01362	-0.01763
21.136	0.46134	0.08139	-0.01267	.66940	.41900	.24949	-0.01651	-0.01716	-0.01716	-0.01542	-0.01769
24.193	0.59362	0.08436	-0.01136	.66694	.50708	.32032	-0.01600	-0.01717	-0.01717	-0.01564	-0.01827
GRADIENT	.01590	-0.00205	.00106	.10575	.01364	-.00221	-.00013	.00007	.00007	.00011	.00000

REFERENCE DATA

REF = 2090.0000 50.0 FT. 146P = 1076.4000 IN.
 LREF = 474.8100 IN. 146P = .0000 IN.
 BREF = 936.6000 IN. 246P = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELWN-L = .000
 ELWN-R = .000 RUDDER = -10.000
 SPDRK = .000 BOFLAP = -14.250
 ELEVON = .000 ALLRON = .000

RN/L = 2.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.849	-0.0619	0.08565	-0.03765	.45554	-0.06339	.08795	-0.01271	-0.01759	-0.01700	-0.01759	-0.01802
1.000	-0.02486	0.07845	-0.03331	.18157	-0.02626	.07801	-0.01414	-0.01699	-0.01699	-0.01799	-0.01752
3.998	0.02116	0.07502	-0.02906	1.15053	.01590	.07631	-0.01478	-0.01763	-0.01684	-0.01763	-0.01797
7.010	0.07370	0.07267	-0.02630	.78756	.06428	.08112	-0.01498	-0.01712	-0.01684	-0.01712	-0.01819
9.905	0.13636	0.07243	-0.02331	.72636	.12167	.08481	-0.01630	-0.01697	-0.01726	-0.01697	-0.01908
13.865	0.24373	0.07561	-0.02375	.69483	.21894	.12993	-0.01642	-0.01717	-0.01762	-0.01717	-0.01919
17.961	0.37269	0.07669	-0.01821	.67746	.33079	.18810	-0.01654	-0.01749	-0.01763	-0.01749	-0.01919
21.141	0.47895	0.07966	-0.01422	.67060	.41799	.24704	-0.01679	-0.01763	-0.01763	-0.01631	-0.01857
24.193	0.59410	0.08333	-0.01236	.66743	.50777	.31948	-0.01687	-0.01737	-0.01737	-0.01579	-0.01853
GRADIENT	.01495	-0.00185	.00150	.12066	.01356	-.00198	-.00035	.00003	.00003	.00001	.00001

(R8X020) (29 MAR 74)

AMES 3.5-180 OA11B (B10F4C907M5N6) (N07E16) (V5R5)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 9

AMES 3.5-160 OA11B (B10F4C507M3N8) (M87E18) (V5R5)

(RBX021) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4900 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPOBRK = 24.920 BDFLAP = -14.250
 ELEVON = .000 AILRON = .000

RN/L = 1.94 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
	-1.845	-.08587	.08695	-.03571	.46619	-.08304	.06903	-.01178	-.01652	-.01770	-.01768
	1.076	-.02318	.07953	-.03188	.16628	-.02461	.07909	-.01305	-.01651	-.01785	-.01771
	4.011	.02097	.07583	-.02809	1.13865	.01561	.07711	-.01404	-.01640	-.01758	-.01794
	7.044	.07449	.07351	-.02560	.78286	.06492	.08209	-.01421	-.01651	-.01692	-.01803
	9.943	.13670	.07339	-.02461	.72435	.12198	.09590	-.01526	-.01672	-.01830	-.01881
	13.885	.24325	.07435	-.02329	.69422	.21829	.13055	-.01578	-.01725	-.01830	-.01903
	17.958	.37212	.07715	-.01747	.67678	.33021	.18812	-.01602	-.01715	-.01569	-.01908
	21.122	.48068	.07972	-.01568	.67017	.41964	.24756	-.01625	-.01724	-.01619	-.01846
	24.191	.59179	.08331	-.01158	.66699	.50588	.31880	-.01725	-.01725	-.01569	-.01717
GRADIENT		.01483	-.00150	.00130	.11601	.01343	-.00203	-.00039	.00002	.00002	-.00004

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

AMES 3.5-160 OA11B (B10F4C507M3N8) (M87E18) (V5R5)

(RBX022) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPOBRK = 24.920 BDFLAP = -14.250
 ELEVON = .000 AILRON = .000

RN/L = 1.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
	24.190	.63047	.09221	-.01706	.67012	.53732	.34246	-.01152	-.00966	-.00835	-.01046
	27.196	.75585	.09478	-.01851	.66873	.62879	.42967	-.01080	-.00850	-.00799	-.00823
	29.973	.87248	.09700	-.01873	.66767	.70734	.51991	-.01008	-.00787	-.00701	-.00814
	33.918	1.04709	.09949	-.02283	.66779	.81340	.66685	-.00924	-.00650	-.00636	-.00245
	39.004	1.27259	.10037	-.03337	.66937	.92578	.87894	-.00639	-.00330	-.00330	-.00337
	42.987	1.42823	.09826	-.04132	.67033	.97949	1.04369	-.00289	-.00368	.003495	.00466
	47.108	1.56439	.09088	-.05202	.67188	.99817	1.20799	.02554	.03057	.02315	.02977
	51.122	1.69093	.08763	-.06804	.67438	.99313	1.37136	.03899	.04045	.03660	.04147
GRADIENT		.04017	-.00018	-.00183	.00017	.01775	.13889	.00177	.00181	.00156	.00177

TABULATED SOURCE DATA FOR QAL18 (ARC 3.5-160)

DATE 01 APR 74

AVES 3.5-160 QAL18 (B10F4C50770000) (N07E18) (V0R18)

(R0X023) (29 MAR 74)

REFERENCE DATA

SREF = 2000.0000 SQ.FT. YREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6000 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RM/L = 1.32 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = .000 ELW-L = .000
 ELW-R = .000 RUDDER = -10.000
 SPOBRK = 24.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

MACH	ALPHA	ON	CA	CLM	KCP/L	CL	CD	CP1	CP2	CP3	CP4
7.320	24.154	.62360	.08216	-.01523	.66864	.54085	.33281	-.01318	-.01284	-.01087	-.01433
	27.280	.73998	.08563	-.01682	.66795	.63634	.42422	-.01266	-.01195	-.00963	-.01301
	30.026	.86232	.08883	-.01933	.66782	.71946	.51842	-.01205	-.01125	-.01004	-.01214
	33.905	1.03557	.09116	-.02342	.66792	.82524	.66448	-.01097	-.00999	-.00870	-.01287
	39.008	1.28329	.09260	-.03418	.66931	.93890	.87970	-.00707	-.00497	-.00434	-.01059
	43.015	1.43940	.08807	-.04224	.67048	.99236	1.04634	.00523	.00774	.00539	.00396
	47.135	1.57815	.08372	-.05399	.67224	1.01085	1.21220	.02879	.03324	.02834	.03114
	51.109	1.70355	.08085	-.06706	.67407	1.00471	1.37811	.04348	.04561	.04296	.04397
GRADIENT		.04051	-.00008	-.00191	.00021	.01796	.03936	.00202	.00213	.00189	.00208

AVES 3.5-160 QAL18 (B10F4C50770000) (N07E18) (V0R18)

(R0X024) (29 MAR 74)

REFERENCE DATA

SREF = 2000.0000 SQ.FT. YREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6000 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RM/L = 1.67 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = .000 ELW-L = .000
 ELW-R = .000 RUDDER = -10.000
 SPOBRK = .000 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

MACH	ALPHA	ON	CA	CLM	KCP/L	CL	CD	CP1	CP2	CP3	CP4
7.320	24.222	.62863	.08233	-.01506	.66855	.53951	.33300	-.01470	-.01396	-.01374	-.01319
	27.198	.73341	.08587	-.01684	.66787	.63264	.42185	-.01422	-.01311	-.01182	-.01300
	30.040	.87829	.08829	-.01972	.66802	.71611	.51611	-.01357	-.01246	-.01079	-.01172
	33.916	1.03892	.09105	-.02339	.66793	.82297	.66306	-.01228	-.01094	-.01073	-.01314
	39.011	1.27848	.09214	-.03407	.66851	.93541	.87636	-.00890	-.00671	-.00725	-.01218
	42.981	1.43491	.08864	-.04181	.67041	.98969	1.04276	.00310	.00634	.00250	.00203
	47.134	1.57302	.08361	-.05303	.67205	1.00813	1.20910	.02545	.03119	.02290	.02826
	51.182	1.69993	.08052	-.06714	.67411	1.00286	1.37496	.03989	.04262	.03616	.04085
GRADIENT		.04050	-.00009	-.00190	.00021	.01796	.03932	.00194	.00208	.00176	.00196

TABULATED SOURCE DATA FOR QAL1B (ARC 3.5-160)

DATE 01 APR 74

(RBX025) (29 MAR 74)

AVES 3.5-160 QAL1B (B10F4C5D7M3N8) (A97E18) (V5R5)

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 RUDDER = -10.000
SPDRK = 54.920 BOFLAP = -14.250
ELEVON = .000 AILRON = .000

REFERENCE DATA

SECT = 2990.0000 56.FT. XMRP = 1076.4800 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BREF = 936.6000 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RN/L = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
7.320	24.195	.62571	.06230	-.01295	.66759	.53701	.33151	-.01295	-.01243	-.01270	-.01302
	27.206	.75285	.08598	-.01360	.66644	.53008	.42057	-.01266	-.01198	-.01107	-.01104
	30.013	.87213	.08868	-.01562	.66639	.71084	.51302	-.01193	-.01146	-.01066	-.00869
	33.923	1.04632	.09095	-.02020	.66689	.81747	.65939	-.01069	-.00984	-.00995	-.00748
	39.078	1.26653	.09105	-.03161	.66891	.92865	.86795	-.00851	-.00703	-.00792	-.00945
	42.943	1.43083	.08827	-.04185	.67045	.98728	1.03939	-.00372	-.00195	-.00344	-.00537
	47.066	1.58014	.08314	-.05612	.67269	1.01545	1.21351	.00981	.01263	.00797	.00954
	51.096	1.69524	.07966	-.06827	.67439	1.00260	1.36929	.03493	.03493	.03045	.03486
GRADIENT	.04074	.04074	-.00012	-.00211	.00029	.01826	.03939	.00141	.00149	.00129	.00136

AVES 3.5-160 QAL1B (B10F4C5D7M3N8) (A97E18) (V5R5)

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 RUDDER = -20.000
SPDRK = 54.920 BOFLAP = -14.250
ELEVON = .000 AILRON = .000

REFERENCE DATA

SECT = 2990.0000 56.FT. XMRP = 1076.4800 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BREF = 936.6000 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RN/L = 2.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
7.320	24.340	.62786	.06281	-.01381	.66785	.53792	.33423	-.01116	-.01085	-.00969	-.01233
	27.346	.75579	.08676	-.01523	.66719	.63148	.42424	-.01058	-.01019	-.00832	-.01056
	30.172	.87849	.08944	-.01686	.66685	.71452	.51885	-.01016	-.00944	-.00763	-.00943
	34.075	1.05281	.09187	-.02167	.66735	.82056	.66596	-.00895	-.00827	-.00835	-.01037
	39.156	1.27953	.09223	-.03295	.66920	.93395	.87946	-.00657	-.00536	-.00461	-.01041
	43.117	1.43385	.08796	-.04107	.67023	.96653	1.04423	.00587	.00612	.00718	.00452
	47.256	1.56822	.08287	-.05293	.67206	1.00349	1.20798	.02761	.03278	.02564	.03089
	51.353	1.69643	.08091	-.06621	.67395	.99674	1.37510	.04161	.04347	.03985	.04325
GRADIENT	.04035	.04035	-.00013	-.00195	.00024	.01782	.03920	.00187	.00199	.00173	.00195

DATE 01 APR 74

TABULATED SOURCE DATA FOR OAL18 (ARC 3.5-180)

PAGE 12

AVES 3.5-180 OAL18 (B10F4C5D7M3N8) (NOTE18) (VSR5)

(RBX027) (29 MAR 74)

REFERENCE DATA

SKEW = 2890.0000 98.FT. YARP = 1076.4800 IN.
 LK07 = 474.8100 IN. YARP = .0000 IN.
 SKEW = 936.6000 IN. ZARP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.80 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

DATA = .000 ELWN-L = -15.000
 ELWN-R = -25.000 RUDDER = .000
 SPOBRK = 54.920 BDFLAP = -14.250
 ELEVON = -20.000 AILRON = 5.000

MACH	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
7.350	.75434	.08285	.01496	.65289	.62508	.43031	-.00859	-.00909	-.00644	-.00737	
28.278	.91518	.08596	.02008	.65214	.72896	.55996	-.00751	-.00761	-.00555	-.00431	
35.223	1.04920	.08654	.02172	.65259	.80719	.67984	-.00878	-.00880	-.00336	-.00107	
36.075	1.17227	.08599	.02197	.65229	.87003	.79030	-.00842	-.00650	-.00467	.00053	
40.682	1.29600	.08345	.02049	.65432	.92205	.90887	-.00565	-.00581	-.00592	-.00153	
43.653	1.41610	.07997	.01851	.65532	.96577	1.03676	-.00367	-.00332	-.00213	-.00613	
46.942	1.59923	.07195	.01119	.65749	.99618	1.25315	-.01425	.01413	.01448	.01177	
54.157	1.77406	.06535	.01244	.65743	.96243	1.44396	.04397	.04569	.04280	.04371	
GRADIENT	.03679	-.00077	-.00027	.00023	.01371	.04006	.00179	.00184	.00165	.00157	

AVES 3.5-180 OAL18 (B10F4C5D7M3N8) (NOTE18) (VSR5)

(RBX026) (29 MAR 74)

REFERENCE DATA

SKEW = 2890.0000 98.FT. YARP = 1076.4800 IN.
 LK07 = 474.8100 IN. YARP = .0000 IN.
 SKEW = 936.6000 IN. ZARP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.02 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = .000 ELWN-L = -5.000
 ELWN-R = -15.000 RUDDER = .000
 SPOBRK = 54.920 BDFLAP = -14.250
 ELEVON = -10.000 AILRON = 5.000

MACH	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
7.350	.77301	.08312	.00167	.65922	.64126	.43959	-.01176	-.01181	-.01063	-.01210	
28.294	.94286	.08591	.00346	.65868	.75178	.57518	-.01130	-.01105	-.00874	-.01086	
35.237	1.07900	.08633	.00177	.65940	.83148	.69308	-.01030	-.01011	-.00663	-.00713	
36.082	1.20379	.08537	-.00126	.66036	.89712	.81168	-.00877	-.00946	-.00796	-.00697	
40.904	1.33234	.08390	-.00597	.66159	.93212	.93575	-.00871	-.00855	-.00742	-.00947	
43.661	1.46149	.08070	-.01078	.66263	.99747	1.07122	-.00537	-.00394	-.00326	-.00885	
46.926	1.63670	.07172	-.02224	.66485	1.02101	1.28118	.02228	.02375	.02138	.01945	
54.141	1.76876	.06565	-.02149	.66433	.96291	1.47197	.05366	.05415	.04910	.05265	
GRADIENT	.03949	-.00377	-.00114	.00026	.01390	.04090	.00235	.00239	.00212	.00220	

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-180)

PAGE 13

AWES 3.5-180 OA11B (B10F4C507M3N8) (N 385)

(RBX029) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RM/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.551	.64357	.06420	-.02390	.67327	.55040	.34400	-.01436	-.01467	-.01481	-.01609
27.475	.76796	.06737	-.02404	.67116	.64105	.43183	-.01414	-.01409	-.01396	-.01562
30.157	.86586	.06016	-.02636	.67063	.72068	.52300	-.01341	-.01372	-.01298	-.0159~
34.225	1.07450	.09319	-.03229	.67075	.83604	.68137	-.01205	-.01193	-.01004	-.01340
39.061	1.30049	.0940~	-.04317	.67166	.95055	.89251	-.01016	-.00961	-.00906	-.01294
43.855	1.50363	.09006	-.05613	.67334	1.02200	1.10686	.00104	.00503	.00237	-.00093
49.004	1.69314	.06310	-.07129	.67504	1.04796	1.33842	.02879	.03164	.02957	.02252
54.194	1.84005	.07937	-.08161	.67595	1.01212	1.53673	.05450	.05755	.05030	.05211
GRADIENT	.04156	-.00020	-.00209	.00014	.01681	.04126	.00215	.00229	.00206	.00207

PARAMETRIC DATA

BETA = .000 ELVN-L = 5.000
 ELVN-R = -5.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = 5.000

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RM/L = 1.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.536	.63472	.06317	-.01978	.67113	.54266	.23926	-.01459	-.01436	-.01403	-.01427
27.395	.76019	.06696	-.02216	.67042	.63491	.42701	-.01427	-.01383	-.01268	-.01416
30.044	.86135	.09017	-.02517	.67020	.71779	.51933	-.01322	-.01262	-.01159	-.01235
34.171	1.07390	.09319	-.03076	.67023	.83617	.68027	-.01165	-.01065	-.00863	-.00936
39.064	1.30163	.09404	-.04224	.67159	.95137	.89329	-.00649	-.00404	-.00292	-.00458
43.892	1.50767	.06962	-.05400	.67280	1.02422	1.11000	.00102	.00327	.00352	.00023
49.032	1.70226	.06303	-.06993	.67466	1.05290	1.34015	.02678	.02955	.02651	.02076
54.216	1.84127	.07965	-.08081	.67565	1.01416	1.54365	.03378	.03671	.03087	.03122
GRADIENT	.04197	-.00017	-.00214	.00016	.01711	.04152	.00211	.00223	.00201	.00194

PARAMETRIC DATA

BETA = .000 ELVN-L = 5.000
 ELVN-R = -5.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = 5.000

AWES 3.5-180 OA11B (B10F4C507M3N8) (M07E16) (V5R5)

(RBX030) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-100)

PAGE 10

AMES 3.5-100 OA118 (B10F4C07H3M3) (NOTE10) (VSR3)

(RBN031) (29 MAR 74)

REFERENCE DATA

SREF = 2990.0000 98.47. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.8600 IN. ZREF = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPODRK = 54.920 SDFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

RN/L = 2.01 GRADIENT INTERVAL = -9.00/ 9.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.502	.71722	.10794	-.06826	.70399	.60787	.9567	-.01199	-.01257	-.01324	-.01264
27.397	.65500	.11575	-.10052	.70203	.70584	.49619	-.01124	-.01189	-.01211	-.01250
30.096	.56702	.12232	-.11147	.70037	.73260	.60060	-.01036	-.01075	-.00996	-.01048
34.116	1.18749	.12974	-.12970	.69904	.91036	.77544	-.010703	-.01053	-.00952	-.00906
39.031	1.40408	.12945	-.15160	.69659	1.00918	.96478	.01471	.03327	.01678	.00641
43.640	1.63741	.13526	-.18021	.69934	1.06735	1.23172	.02432	.02631	.01969	.01304
49.048	1.83457	.13483	-.21541	.70197	1.10104	1.47356	.04484	.04901	.04221	.03966
54.232	3.67228	.21680	-.29707	.68891	1.97056	3.10636	.09803	.06706	.03630	.03092
GRADIENT	.07874	.00255	-.00637	-.00030	.03512	.07365	.00250	.00264	.00245	.00225

AMES 3.5-100 OA118 (B10F4C07H3M3) (NOTE10) (VSR3)

(RBN032) (29 MAR 74)

REFERENCE DATA

SREF = 2990.0000 98.47. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.8600 IN. ZREF = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPODRK = 54.920 SDFLAP = 13.750
 ELEVON = .000 AILRON = .000

RN/L = 2.07 GRADIENT INTERVAL = -9.00/ 9.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.546	.68646	.08045	-.05554	.68969	.57046	.39997	-.01526	-.01415	-.01493	-.01648
27.447	.60540	.09677	-.06367	.68825	.67014	.45711	-.01470	-.01358	-.01434	-.01564
30.093	.57031	.10116	-.07092	.68724	.75419	.58399	-.01349	-.01194	-.01227	-.01434
34.136	1.12565	.10607	-.08467	.68687	.67868	.71963	-.01096	-.00806	-.00835	-.01025
38.016	1.34900	.10680	-.10234	.68720	.97639	.96988	.00074	.00937	.00577	.00040
43.947	1.57827	.10810	-.12853	.68911	1.06130	1.17314	.00229	.00604	.00161	.00120
49.009	1.79182	.10596	-.15560	.69116	1.07719	1.39903	.02662	.03775	.03177	.02520
53.044	1.96677	.10201	-.16326	.69093	1.08261	1.56804	.04728	.03224	.04873	.04231
GRADIENT	.04360	.00035	-.00397	.00010	.01775	.04325	.00207	.00229	.00212	.00195

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 19

AVES 3.5-160 OA11B (B10F4C5J7H3N8) (W8TE18) (VSR5) (RBX033) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 50. FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
	24.513	.64776	.08264	-.02743	.87513	.85501	.34413	-.01335	-.01326	-.01486	-.01725
	27.457	.76121	.06604	-.03212	.67469	.65262	.43633	-.01487	-.01470	-.01466	-.01720
	30.116	.90679	.09152	-.03616	.67421	.73846	.53416	-.01415	-.01391	-.01326	-.01652
	34.170	1.09716	.09416	-.04566	.67493	.65489	.69413	-.01295	-.01212	-.01173	-.01497
	39.062	1.33029	.09513	-.06102	.67639	.97297	.91216	-.01865	-.00601	-.00749	-.01092
	43.677	1.53397	.09049	-.07639	.67826	1.04301	1.12645	.00379	.00799	.00076	.00022
	49.028	1.72890	.08480	-.10071	.66062	1.06963	1.36095	.03231	.03642	.03064	.02469
	53.063	1.83603	.08177	-.10313	.66707	1.03746	1.51703	.04960	.05309	.04776	.04270
GRADIENT	.04270		-.00012	-.00290	.00023	.01186	.04605	.00219	.00235	.00216	.00204

PARAMETRIC DATA

BETA = .000 EL/W-L = .000
 EL/W-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = .000
 ELEVON = .000 AILRON = .000

AVES 3.5-160 OA11B (B10F4C5J7H3N8) (W8TE18) (VSR5) (RBX034) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 50. FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
	24.522	.72346	.10805	-.09672	.70877	.81421	.36676	-.01364	-.01353	-.01364	-.01316
	27.463	.86460	.11377	-.11210	.70634	.71470	.49967	-.01279	-.01247	-.01134	-.01267
	30.101	.99846	.12069	-.12364	.70442	.80156	.60416	-.01157	-.01067	-.01009	-.01074
	34.152	1.19650	.12996	-.14276	.70265	.91721	.77925	-.00919	-.00677	-.00627	-.00747
	39.008	1.41130	.13053	-.16576	.70199	1.01453	.98972	.01633	.03694	.02626	.01019
	43.668	1.64871	.13683	-.19609	.70251	1.09337	1.24156	.02111	.02671	.02223	.01323
	49.009	1.85273	.13723	-.23732	.70379	1.11170	1.46647	.04417	.04827	.04341	.03995
	53.047	2.03747	.13607	-.26279	.70961	1.11432	1.71119	.06604	.06754	.06995	.06451
GRADIENT	.04602		.00106	-.00615	.00001	.01780	.04622	.00279	.00296	.00284	.00260

PARAMETRIC DATA

BETA = .000 EL/W-L = 10.000
 EL/W-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

DATE 01 APR 74

TABULATED SOURCE DATA FOR OAL118 (ARC 3.5-180)

PAGE 18

AMES 3.5-180 OAL118 (810F4C507M0M8) (N87E18) (VSR5)

(R8X038) (29 MAR 74)

REFERENCE DATA

9007 = 2890.0000 80.FT. 1000P = 1076.4000 IN.
 LREF = 474.8100 IN. 1000P = .0000 IN.
 8007 = 936.8000 IN. 2000P = 400.0000 IN.
 SCALE = .0150

MACH = 10.290

ALPHA	CA	CLN	XCPL	CL	CD	CP1	CP2	CP3	CP4
24.501	.08366	-.01480	.66872	.50848	.32413	.00192	.00119	.00426	.01222
27.443	.08717	-.01536	.66758	.60192	.41080	.00326	.00333	.00802	.02260
30.214	.09029	-.01734	.66742	.68367	.50273	.00394	.00479	.00737	.04497
34.061	.09213	-.02209	.66603	.78949	.64536	.00497	.00506	.00568	.03481
38.026	.09291	-.03194	.66533	.88549	.81120	.00571	.00626	.00701	.02472
42.364	.09133	-.04424	.67145	.95852	.99774	.00571	.00450	.00433	.02334
GRADIENT	.00043	-.00167	.00017	.02342	.03791	.00021	.00019	-.00005	.00030

RN/L = 1.87 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

AMES 3.5-180 OAL118 (810F4C507M0M8) (N87E18) (VSR5)

(R8X038) (29 MAR 74)

REFERENCE DATA

9007 = 2890.0000 80.FT. 1000P = 1076.4000 IN.
 LREF = 474.8100 IN. 1000P = .0000 IN.
 8007 = 936.8000 IN. 2000P = 400.0000 IN.
 SCALE = .0150

MACH = 10.290

ALPHA	CA	CLN	XCPL	CL	CD	CP1	CP2	CP3	CP4
24.736	.08320	-.01695	.66867	.58219	.33817	.00481	.00244	.00736	.00429
27.627	.08741	-.01944	.66937	.61377	.42095	.00586	.00408	.00866	.00845
30.104	.09024	-.02196	.66879	.69201	.50553	.00772	.00611	.01295	.01596
34.206	.09336	-.02700	.66823	.81171	.64486	.01120	.00958	.01410	.02094
38.078	.09333	-.03749	.67095	.90479	.82746	.00963	.00929	.01069	.03918
41.691	.09106	-.04561	.67167	.97982	.99806	.01236	.01384	.01171	.01907
GRADIENT	.00047	-.00171	.00013	.02867	.03913	.00045	.00060	.00022	.00145

RN/L = 1.95 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

DATE 01 APR 74

TABULATED SOURCE DATA FOR QAL1B (ARC 3.5-160)

PAGE 17

AMES 3.5-160 QAL1B (810F4C507M3N6) (A97E18) (V5R5)

(R0X037) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.8800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.622	.60996	.06118	-.02786	.67623	.51979	.32732	.00045	.00030	.00110	-.00013
27.531	.73680	.08503	-.03153	.67529	.61406	.41597	.00190	.00133	.00295	.00055
30.190	.85533	.08767	-.03516	.67469	.69513	.50608	.00356	.00369	.00632	.00284
34.179	1.04517	.09203	-.04346	.67466	.81255	.68329	.00606	.00663	.00815	.00828
36.105	1.22422	.09235	-.05984	.67746	.90632	.82814	.00614	.00763	.00676	.00829
41.872	1.58627	.09008	-.07440	.67918	.97216	.99236	.00778	.00821	.00525	.00637
GRADIENT	.04542	.00056	-.00272	.00019	.02854	.03686	.00045	.00050	.00026	.00048

PARAMETRIC DATA

BETA = .000
 ELVN-L = .000
 ELVN-R = .000
 RUDDER = .000
 SPOILER = 54.920
 BOFLAP = .000
 ELEVON = .000
 AILRON = .000

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.8800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.612	.63633	.06630	-.02501	.69090	.54174	.34528	-.00230	-.00193	.00008	-.00303
27.496	.76992	.09403	-.06263	.69507	.63934	.43686	-.00128	-.00060	.00027	-.00239
30.205	.89441	.09834	-.07215	.69863	.72350	.53496	.00045	.00112	.00259	-.00068
34.169	1.08681	.10449	-.08442	.69771	.84218	.69796	.00269	.00411	.00635	.00287
36.096	1.26525	.10656	-.10693	.69021	.92596	.86451	.00446	.00446	.00621	.00374
41.697	1.43796	.10628	-.12693	.69192	1.00011	1.03666	.00678	.00948	.00656	.00738
GRADIENT	.04663	.00107	-.00417	.00006	.02673	.04039	.00062	.00067	.00032	.00066

PARAMETRIC DATA

BETA = .000
 ELVN-L = .000
 ELVN-R = .000
 RUDDER = .000
 SPOILER = 54.920
 BOFLAP = 13.750
 ELEVON = .000
 AILRON = .000

AMES 3.5-160 QAL1B (810F4C507M3N6) (A97E18) (V5R5)

(R0X036) (29 MAR 74)

DATE 01 APR 74

REFERENCE DATA

900P	=	200,000	20.PT.	100P	=	1070,4000	IN.
100P	=	470,0100	IN.	100P	=	.0000	IN.
200P	=	900,0000	IN.	200P	=	400,0000	IN.
SCALE	=		.0150				

CONSTANT = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

[illegible]

JAMES S. S-100 OA11B (B1CF4C507M3N0) (N07E10) (V9R5)

REFERENCE DATA

9627	=	2920,0000	96.FT.	1962	=	1079,4800	IN.
1967	=	474,8100	IN.	1969	=	.0000	IN.
9627	=	936,6000	IN.	2969	=	400,0000	IN.
SCALE	=	.0120					

Run	Time	Gradient Interval	Temp
1	1.27	-5.00/	5.00

	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
10.280									
ALPHA									
24.571	.56273	.01316	.65162	.47732	.30935	-.00347	-.00263	-.00225	-.00511
27.465	.67915	.01933	.64982	.56303	.39937	-.00254	-.00159	-.00040	-.00040
30.129	.76735	.06907	.64894	.47225	.47225	-.00111	-.00001	-.00079	-.00269
34.136	.94964	.09183	.64919	.73463	.60904	.00090	.00203	.00164	-.00122
36.072	1.12189	.09245	.64992	.68518	.76460	.00078	.00187	.00033	-.00026
41.839	1.27433	.09102	.65067	.69668	.91784	.00050	.00126	-.00138	-.00094
				.79767	.03547	.00025	.00025	.00008	-.00027

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-180)

PAGE 19

AVES 3.5-180 OA11B (B10F4C507H3N8) (N87E18) (VSR5)

(RDX041) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. YMRP = 1076.4600 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6900 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.641	-1.10327	.10436	-.00981	.62603	-.09966	.10782	.00667	-.00365	-.00482	-.00509
1.027	-.05364	.08971	-.01228	.57812	-.05524	.06873	-.00094	-.00403	-.00437	-.00525
4.015	-.00835	.06169	-.01065	.21365	-.01405	.06080	-.00343	-.00414	-.00429	-.00429
9.017	.08295	.07497	-.01031	.70441	.07017	.08704	-.00436	-.00469	-.00469	-.00715
13.943	.20629	.07384	-.00814	.67409	.16242	.12137	-.00546	-.00533	-.00439	-.00770
19.163	.36222	.07641	.00304	.65699	.31708	.19108	-.00554	-.00563	-.00430	-.00778
24.253	.53596	.06299	.01166	.65221	.45457	.29582	-.00522	-.00552	-.00322	-.00568
GRADIENT	.01620	-.00366	.00014	-.07250	.01465	-.00455	-.00172	-.00006	.00009	-.00021

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOILER = 54.920 BOFLAP = -14.230
 ELEVON = -40.000 AILRON = .000

REFERENCE DATA

SREF = 2890.0000 SQ.FT. YMRP = 1076.4600 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6900 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.769	-.05397	.08718	-.03522	.42666	-.05125	.06881	-.00057	-.00216	-.00115	-.00319
1.090	-.01323	.07937	-.03440	-.26975	-.01473	.07910	-.00126	-.00265	-.00181	-.00360
4.081	.03079	.07530	-.03386	1.05320	.02535	.07730	-.00166	-.00283	-.00253	-.00376
9.078	.12919	.07464	-.04305	.77912	.11980	.09409	-.00219	-.00293	-.00234	-.00389
13.960	.27330	.07962	-.05982	.73625	.24802	.14321	-.00232	-.00277	-.00188	-.00306
19.097	.45174	.08964	-.07681	.72062	.39795	.23250	-.00164	-.00247	-.00023	-.00246
24.325	.66474	.10325	-.09882	.71314	.56319	.36789	-.00131	-.00133	-.00024	-.00073
GRADIENT	.01449	-.00203	.00023	.10970	.01310	-.00196	-.00016	-.00011	-.00024	-.00010

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPOILER = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

AVES 3.5-180 OA11B (B10F4C507H3N8) (N87E18) (VSR5)

(RDX042) (29 MAR 74)

ANES 3.5-180 QAL18 (810F4C507M3N6) (N87E18) (VSR8)

(28J043) (29 MAR 74)

REFERENCE DATA

SRZ = 2890.0000 50.FT. YARP = 1076.4800 IN.
 LRZ = 474.8100 IN. YARP = .0000 IN.
 S-07 = 936.6800 IN. ZARP = 400.0000 IN.
 SCALE = .0150

RV/L = 1.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.280

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-2.016	-.06801	.08796	-.03182	.49708	-.08287	.08023	-.00473	-.00871	-.00887	-.00817
1.086	-.02373	.07799	-.02848	.23079	-.02321	.07753	-.00535	-.00729	-.00700	-.00638
4.129	.01747	.07267	-.02486	1.16606	.01219	.07374	-.00576	-.00729	-.00743	-.00683
9.036	.10453	.08966	-.02358	.74083	.09229	.08522	-.00647	-.00729	-.00657	-.00697
13.922	.23106	.07103	-.02428	.69755	.20718	.12458	-.00669	-.00758	-.00857	-.00935
19.174	.39587	.07322	-.01870	.67688	.34920	.20107	-.00682	-.00758	-.00826	-.00939
24.247	.57797	.08249	-.01829	.67131	.49312	.31256	-.00836	-.00744	-.00599	-.00813
GRADIENT	.01356	-.00249	.00115	.11026	.01221	-.00269	-.00317	-.00009	-.00009	-.00007

PARAMETRIC DATA

BETA = .000 ELW-L = .000
 ELW-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOPLAP = -14.250
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SRZ = 2890.0000 50.FT. YARP = 1076.4800 IN.
 LRZ = 474.8100 IN. YARP = .0000 IN.
 S-07 = 936.6800 IN. ZARP = 400.0000 IN.
 SCALE = .0150

RV/L = 2.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.280

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-1.975	-.08295	.09425	-.03095	.52859	-.07965	.09705	-.00544	-.00660	-.00554	-.00834
1.020	-.04166	.08329	-.02766	.42256	-.04313	.08254	-.00821	-.00775	-.00590	-.00886
4.159	.00222	.07460	-.02415	4.55880	-.00322	.07476	-.00846	-.00796	-.00821	-.00879
9.108	.08633	.07003	-.02090	.74853	.07416	.08282	-.00869	-.00797	-.00584	-.00513
13.972	.20572	.07085	-.02163	.69756	.18273	.11642	-.00714	-.00797	-.00604	-.00543
19.090	.38595	.07485	-.01805	.67777	.31856	.19925	-.00695	-.00797	-.00494	-.00522
24.312	.54439	.08068	-.01809	.67056	.46281	.29784	-.00657	-.00797	-.00479	-.00665
GRADIENT	.01366	-.00317	.00111	.66264	.01246	-.00362	-.00016	-.00022	-.00011	-.00007

PARAMETRIC DATA

BETA = .000 ELW-L = .000
 ELW-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOPLAP = -14.250
 ELEVON = .000 AILRON = .000

ANES 3.5-180 QAL18 (810F4C507M3N6) (N87E18) (VSR8)

(28J044) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR QAL18 (ARC 3.5-180)

PAGE 21

ANES 3.5-180 QAL18 (810F4C5D7M3N6) (M87E18) (VSR5)

(R8X048) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 58. FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

MACH = 10.290

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.356	.59901	.08280	-.01776	.67059	.51155	.32247	-.00067	-.00083	.00188	-.00098
27.392	.72755	.08662	-.01917	.66941	.60612	.41164	-.00315	.00002	.00359	.00167
30.256	.84696	.08914	-.02059	.66868	.68668	.50375	.00081	.00081	.00451	.00593
34.130	1.02180	.09060	-.02776	.66970	.79496	.64830	.00095	.00151	.00457	.01148
38.181	1.19953	.09142	-.03669	.67096	.86639	.81335	.00215	.00298	.00520	.01637
42.428	1.36335	.09022	-.04725	.67220	.96026	.99965	.00543	.00493	.00257	.00745
GRADIENT	.04137	.00040	-.00167	.03012	.02504	.03763	.00031	.00031	.00005	.00070

RN/L = 1.82 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPODRK = 54.920 SDFLAP = -14.250
 ELEVON = .000 AIRLON = .000

REFERENCE DATA

SREF = 2890.0000 58. FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

MACH = 10.290

ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.061	.69791	.08519	-.03289	.67781	.56784	.34663	-.03555	-.03254	-.03255	-.03804
27.125	.73211	.08758	-.03596	.67622	.66308	.43910	-.03519	-.03222	-.03204	-.03787
29.991	.91662	.08695	-.04081	.67587	.75116	.53622	-.03467	-.03200	-.03061	-.03757
33.912	1.09700	.09042	-.04942	.67610	.85995	.68708	-.03391	-.03128	-.03013	-.03668
39.076	1.32660	.08911	-.06441	.67732	.97320	.90871	-.03194	-.02971	-.02831	-.03435
43.035	1.50351	.08702	-.07700	.67830	1.03959	1.08966	-.02896	-.02879	-.02524	-.03096
47.200	1.64684	.08012	-.08275	.67796	1.06015	1.26277	-.00019	.00847	.00747	.00131
51.156	1.74353	.07795	-.08754	.67784	1.03285	1.40634	.02461	.02505	.02175	.02567
GRADIENT	.04137	-.00030	-.00223	.00006	.01837	.04026	.00187	.00190	.00181	.00202

RUN NO. 0/0 RN/L = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPODRK = 54.920 SDFLAP = -14.250
 ELEVON = .000 AIRLON = .000

ANES 3.5-180 QAL18 (810F4C5D7M3N6) (M87E18) (VSR5)

(R8X048) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR 0A11B (ARC 3.5-160)

PAGE 22

AVES 3.5-160 0A11B (B10F4C507M3N6) (NOTE18) (VSR5)

(RBX047) (29 MAR 74)

REFERENCE DATA

SREF = 2090.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.6100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RUN NO. 0/0 RN/L = 2.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	KCP/L	CL	CD	CP1	CP2	CP3	CP4
5.257	24.401	.65349	.08393	-.03081	.67680	.56227	.34723	-.03550	-.03424	-.03448	-.03664
5.258	27.340	.78548	.08610	-.03415	.67554	.65619	.43723	-.03565	-.03469	-.03570	-.03747
5.259	30.061	.90377	.08858	-.03932	.67346	.74198	.53214	-.03576	-.03425	-.03501	-.03789
5.259	34.134	1.10227	.08925	-.04681	.67582	.86213	.69264	-.03478	-.03328	-.03454	-.03760
5.259	39.102	1.352474	.08640	-.04344	.67688	.98004	.91043	-.03296	-.03149	-.03163	-.03720
5.259	43.936	1.55630	.08523	-.07932	.67621	1.06158	1.14122	-.03093	-.02956	-.02841	-.03652
5.259	49.113	1.74684	.07832	-.08999	.67841	1.08423	1.37187	-.03308	-.03040	-.02864	-.03647
5.259	54.161	1.85633	.07458	-.07233	.67392	1.02586	1.54890	.02890	.03154	.02658	.02700
5.259	GRADIENT	.04205	-.00335	-.00191	.00001	.01712	.04175	.00182	.00189	.00176	.00176

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2090.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.6100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RUN NO. 0/0 RN/L = 1.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	KCP/L	CL	CD	CP1	CP2	CP3	CP4
5.257	28.160	.76731	.09064	.01251	.65416	.63386	.44213	-.03329	-.03268	-.03358	-.03421
5.258	32.112	.93612	.09271	.01900	.65427	.74532	.57721	-.03262	-.03192	-.03321	-.03343
5.258	35.165	1.07522	.09261	.01479	.65507	.82565	.69497	-.03207	-.03129	-.03259	-.03261
5.258	36.061	1.20303	.09138	.01376	.65590	.89088	.81361	-.03102	-.03097	-.03097	-.03175
5.258	40.948	1.33532	.08980	.01268	.65654	.94956	.94310	-.02960	-.02825	-.02901	-.02967
5.257	43.936	1.46381	.08716	.01172	.65713	.99363	1.07844	-.02962	-.02809	-.02831	-.02873
5.258	49.091	1.67918	.08353	.01014	.65783	1.03649	1.32375	-.02988	-.02869	-.02745	-.02780
5.258	54.136	1.82727	.08134	.03860	.65244	1.00480	1.52850	-.03129	-.02706	-.02951	-.02865
5.258	GRADIENT	.04173	-.00044	.00056	.00002	.01497	.04273	.00011	.00025	.00023	.00032

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

(RBX048) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 23

AVES 3.5-160 OA11B (B10F4C507M3N8) (M07E18) (V5R5)

(RBX049) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BOPFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

RUN NO. 0/ 0 RN/L = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
9.256	24.466	.75100	.10825	-.11079	.71274	.63875	.40956	-.03429	-.03344	-.03321	-.03624
9.259	27.404	.66934	.11456	-.12445	.71002	.73680	.51106	-.03378	-.03332	-.03410	-.03617
9.259	30.148	1.02454	.12065	-.13053	.70826	.82536	.61688	-.03374	-.03344	-.03458	-.03635
9.256	34.143	1.22791	.12734	-.16375	.70767	.94479	.79457	-.03196	-.03069	-.03154	-.03479
9.256	39.140	1.48045	.13341	-.19578	.70727	1.06405	1.03795	-.02805	-.02785	-.02707	-.03202
9.256	43.973	1.70115	.13185	-.22480	.70724	1.13285	1.27589	-.02448	.00547	.00230	-.00591
9.256	49.134	1.93385	.13054	-.26705	.70936	1.16657	1.54735	.02301	.02441	.02260	.01661
9.256	54.192	2.04460	.12756	-.24136	.70220	1.09279	1.73276	.03842	.04334	.03932	.03616
	GRADIENT	.04536	.00065	-.00524	-.00021	.01686	.04605	.00260	.00270	.00259	.00248

AVES 3.5-160 OA11B (B10F4C507M3N8) (M07E18) (V5R5)

(RBX050) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOPFLAP = -14.250
 ELEVON = .000 AILRON = .000

RUN NO. 0/ 0 RN/L = 1.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
9.259	-1.960	-.07392	.09567	-.02462	.54089	-.07057	.09617	-.03434	-.03475	-.03763	-.03495
9.259	1.027	-.01678	.08671	-.02372	.15456	-.01833	.08639	-.03406	-.03439	-.03730	-.03451
9.256	4.194	.04547	.08251	-.02454	.85293	.03932	.08341	-.03362	-.03458	-.03725	-.03492
9.256	7.161	.11061	.07916	-.02710	.74759	.09985	.09237	-.03478	-.03549	-.03756	-.03575
9.256	10.028	.18245	.07749	-.03139	.72150	.16617	.10808	-.03465	-.03642	-.03622	-.03659
9.256	13.949	.29663	.07822	-.03533	.70257	.26903	1.4742	-.03596	-.03704	-.03685	-.03730
9.259	16.033	.42980	.07992	-.03601	.68994	.38395	.20905	-.03664	-.03740	-.03592	-.03747
9.256	21.179	.53861	.08174	-.03563	.68364	.47270	.27061	-.03613	-.03702	-.03530	-.03697
9.256	24.190	.65119	.08433	-.03745	.68055	.55946	.34376	-.03629	-.03671	-.03533	-.03672
	GRADIENT	.01934	-.00216	.00001	.05205	.01780	-.00205	.00009	.00003	.00006	.00000

AVES 3.5-180 0A11B (B10F4C5D7M3M6) (N87E18) (V9R5)

(R8X051) (29 MAR 74)

REFERENCE DATA

SREF = 2090.0000 50. FT. XREF = 1076.4000 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.0000 IN. ZREF = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = 9.000 ELW-L = .000
 ELW-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

RM/L = 2.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCF/L	CL	CD	CP1	CP2	CP3	CP4
24.093	.80420	.08068	-.01309	.66774	.51854	.32048	-.01350	-.01266	-.01056	-.01407
27.128	.72842	.08402	-.01342	.66658	.60997	.43692	-.01305	-.01244	-.00967	-.01319
29.991	.84682	.08804	-.01461	.66615	.69207	.49860	-.01294	-.01202	-.00952	-.01260
33.890	1.01799	.08792	-.01899	.66666	.79802	.64181	-.01202	-.01103	-.00907	-.01116
39.094	1.24975	.08841	-.03132	.66695	.91419	.85671	-.00956	-.00812	-.00536	-.00909
43.033	1.40231	.08660	-.03848	.66960	.96592	1.02027	-.00127	-.00018	-.00044	-.00155
47.133	1.53573	.08147	-.05027	.67189	.98505	1.18102	.02179	.02383	.02055	.02090
51.136	1.69227	.07922	-.06102	.67315	.97502	1.33627	.03678	.04054	.03679	.03730
GRADIENT	.03972	-.00008	-.00183	.00024	.01782	.03836	.00176	.00181	.00157	.00172

REFERENCE DATA

SREF = 2090.0000 50. FT. XREF = 1076.4000 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.0000 IN. ZREF = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELW-L = .000
 ELW-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

RM/L = 1.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCF/L	CL	CD	CP1	CP2	CP3	CP4
24.339	.62319	.08016	-.01810	.66923	.53477	.32968	-.01342	-.01355	-.01175	-.01479
27.264	.74248	.08284	-.01598	.66766	.62214	.41359	-.01316	-.01341	-.01214	-.01472
30.003	.86034	.08478	-.01810	.66751	.70264	.50365	-.01223	-.01209	-.00959	-.01376
34.088	1.04678	.08630	-.02209	.66754	.81742	.65960	-.01100	-.01059	-.00895	-.01282
37.991	1.21472	.08999	-.03081	.66900	.90208	.81848	-.01101	-.01097	-.01005	-.01430
43.780	1.47523	.08703	-.04850	.67126	1.00491	1.08354	.00119	.00307	.0113	-.00137
48.991	1.66286	.07895	-.06217	.67336	1.03254	1.30383	.02135	.02378	.01577	.01876
52.948	1.77634	.07677	-.06554	.67318	1.00911	1.46390	.03670	.04007	.03666	.03670
GRADIENT	.04140	-.00014	-.00194	.00021	.01752	.04065	.00170	.00179	.00150	.00163

AVES 3.5-180 0A11B (B10F4C5D7M3M6) (N87E18) (V9R5)

(R8X052) (29 MAR 74)

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-180)

AWES 3.5-180 OA118 (B10F4C507M3N8) (M07E18) (VSR5)

DATE 01 APR 74

(RBX033) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6900 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

RN/L = 1.83 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
7.320	24.237	.37032	.06294	.01613	.64966	.48618	.30984	-.01530	-.01537	-.01420	-.01693
	27.250	.89095	.08563	.02115	.64904	.57507	.39249	-.01482	-.01489	-.01337	-.01634
	29.967	.80193	.06639	.02640	.64822	.65036	.47713	-.01368	-.01368	-.01193	-.01520
	34.009	.96811	.09099	.03178	.64825	.75163	.61690	-.01241	-.01215	-.01011	-.01374
	36.967	1.17474	.09359	.03559	.64916	.85640	.80919	-.01141	-.01089	-.00975	-.01223
	43.841	1.37219	.08614	.03698	.65035	.92865	1.01403	-.00851	-.00777	-.00659	-.00890
	48.931	1.54719	.06279	.03406	.65211	.95403	1.22085	.00897	.00805	.00921	.00867
	52.917	1.85367	.07620	.03770	.65184	.93473	1.36639	.03425	.03380	.03293	.03460
GRADIENT		.03866	-.00017	.00067	.00011	.01644	.03769	.00140	.00136	.00132	.00146

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6900 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

(RBX054) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = 13.750
 ELEVON = .000 AILRON = .000

RN/L = 1.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
7.320	24.303	.64904	.06694	-.05192	.68659	.59575	.34636	-.01585	-.01578	-.01437	-.01696
	27.222	.78021	.09175	-.06021	.68756	.65182	.43849	-.01533	-.01499	-.01376	-.01680
	29.932	.90726	.09571	-.06757	.68682	.73832	.53592	-.01453	-.01421	-.01203	-.01585
	34.017	1.09818	.10065	-.06185	.68664	.83363	.69796	-.01341	-.01289	-.01071	-.01454
	36.973	1.35179	.10480	-.02114	.68747	.96947	.91911	-.00972	-.00763	-.00601	-.01066
	43.784	1.54134	.10351	-.12505	.68900	1.04115	1.14125	.00047	.00047	.00110	-.00046
	48.936	1.73793	.10020	-.15270	.69140	1.06563	1.37854	.02284	.02863	.02231	.02276
	52.928	1.84578	.09844	-.15797	.69059	1.03413	1.53206	.04786	.04944	.04445	.04186
GRADIENT		.04292	.00039	-.00396	.00013	.01768	.04246	.00199	.00212	.00184	.00192

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 26

AWES 3.5-160 OA11B (810F4C507M3N6) (M67E18) (VSR5)

(RBX055) (29 MAR 74)

REFERENCE DATA

SRZF = 2990.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRZF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.350

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
27.226	.78095	.09183	-.05456	.68563	.63463	.42980	-.00893	-.00766	1.63934	-.01061
29.952	.68814	.09375	-.06174	.68484	.72171	.52640	-.00826	-.00673	1.63723	-.00921
34.026	1.07987	.10137	-.07521	.68489	.83825	.66828	-.00733	-.00633	1.63325	-.00773
39.039	1.31755	.10442	-.09556	.68587	.93760	.91097	-.00136	.00020	1.63098	-.00237
GRADIENT	.04713	.00107	-.00347	.00003	.02726	.04087	.00062	.00064	-.00073	.00066

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 JOFLAP = 13.750
 ELEVEN = .000 AILRON = .000

PARAMETRIC DATA

REFERENCE DATA

SRZF = 2990.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRZF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.350

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.391	.61670	.07863	-.01858	.67075	.53124	.32675-1664.17999	.90137	-.02084	.90137	-.02741
27.313	.74814	.08127	-.02066	.66956	.62744	.41549-1659.20000	.89859	-.02060	.89859	-.02741
33.031	.67214	.08431	-.02341	.66935	.71286	.50947-1657.14000	.89744	-.02081	.89744	-.02745
38.963	1.27815	.08883	-.04014	.67122	.93798	.87278-1661.03000	.89961	-.01473	.89961	-.02340
43.836	1.48004	.08458	-.05150	.67243	1.00957	1.08556-1657.13000	.89744	-.00211	.89744	-.01027
48.909	1.67561	.07682	-.06800	.67430	1.04340	1.31334-1655.11000	.89631	.02396	.89631	.01390
52.864	1.77954	.07460	-.07244	.67454	1.01484	1.46370-1656.00999	.89682	.04220	.89682	.03376
GRADIENT	.04181	-.00015	-.00201	.00017	.01614	.04070	.20807	.00208	-.00012	.00198

BETA = .000 ELVN-L = .000
 ELVN-R = .000 BOFLAP = -14.250
 ELEVEN = .000 AILRON = .000

PARAMETRIC DATA

AWES 3.5-160 OA11B (810F4C507M3N6) (M67E18)

(MBX056) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 27

AMES 3.5-160 OA11B (B1DF4C5D7M3N8)

(RBX057) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 BOFLAP = -14.250

RN/L = 1.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.035	.23898	.03955	.09952	.51110	.20215	.13345	-.01456	-.01541	-.01470	-.01569
27.064	.29376	.04008	.12220	.51226	.24508	.17034	-.01473	-.01555	-.01556	-.01627
29.680	.35056	.04101	.14296	.51419	.28362	.21011	-.01497	-.01581	-.01541	-.01626
33.919	.43076	.04146	.17360	.51574	.33432	.27478	-.01391	-.01486	-.01583	-.01535
36.973	.53268	.04027	.20834	.52021	.38895	.36647	-.01323	-.01323	-.01193	-.01362
43.637	.62855	.03728	.23731	.52501	.42756	.48223	-.00798	-.01073	-.00646	-.01082
48.993	.73038	.03341	.26143	.53251	.45403	.57309	-.00908	-.00893	-.00921	-.00648
52.955	.81212	.03146	.27315	.53824	.45811	.65918	-.00745	-.00730	-.00512	-.00660
GRADIENT	.01965	-.00030	.00615	.00793	.00912	.01835	.00045	.00030	.00039	.00035

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

AMES 3.5-160 OA11B (B1DF4C5D7M3N8) (RBX058) (29 MAR 74)

RN/L = 1.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.500	.60489	.07696	.00159	.65905	.51767	.32270	-.00329	-.00456	-.00328	.90643
27.380	.72416	.08107	.00230	.65885	.60576	.40502	-.00320	-.00476	-.00205	-.00333
30.092	.84191	.08282	.00375	.65557	.66691	.49379	-.00284	-.00381	-.00440	-.00262
34.161	1.02429	.08416	.00326	.66113	.60030	.64480	-.00144	-.00211	-.00105	-.00061
39.046	1.24352	.08366	-.01173	.66336	.91291	.84820	-.00024	-.00033	-.00068	.00144
43.935	1.45474	.08002	-.02550	.66626	.99263	1.06647	.00283	.00359	.00506	.00480
49.041	1.63760	.07116	-.03827	.66835	1.01974	1.26332	.02976	.03565	.02899	.02881
51.037	1.74262	.06413	-.05132	.67056	.99610	1.43130	.05238	.05424	.05322	.05241
GRADIENT	.04100	-.00049	-.00191	.00043	.01779	.03989	.00168	.00187	.00169	-.01415

DATE 01 APR 74

TABULATED SOURCE DATA FOR OAL18 (ARC 3.5-100)

PAGE 26

AMES 3.5-100 OAL18 (810F4C5D7M3N6) (M08E18) (V989)

(R0X099) (29 MAR 74)

REFERENCE DATA

SREF = 2090.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELW-L = .000
 ELW-R = .000 RUDDER = .000
 SPDRK = 54.920 BOPLAP = -14.250
 ELEVON = .000 ATLON = .000

RN/L = 1.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-2.125	.06904	-.03203	.48550	-.06228	.09141	-.01231	-.01269	-.01342	-.01371
.808	.07903	-.02826	.19208	-.02266	.07948	-.01334	-.01341	-.01449	-.01424
4.069	.07540	-.02330	.94658	.02342	.07727	-.01319	-.01336	-.01406	-.01412
7.075	.07331	-.01972	.74959	.06907	.08244	-.01348	-.01363	-.01424	-.01476
9.901	.07266	-.01721	.70485	.12263	.09516	-.01390	-.01426	-.01360	-.01340
13.897	.07307	-.01221	.67546	.21200	.12773	-.01416	-.01466	-.01407	-.01372
17.666	.07520	-.00266	.66266	.31343	.18005	-.01395	-.01394	-.01356	-.01366
21.008	.07601	.00382	.65698	.39682	.23465	-.01417	-.01310	-.01356	-.01534
24.084	.07932	.00735	.69531	.47996	.30146	-.01429	-.01315	-.01431	-.01479
GRADIENT	-.00219	.00141	.07583	.01360	-.00226	-.00014	-.00011	-.00010	-.00007

REFERENCE DATA

SREF = 2090.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 BOPLAP = -14.250

AMES 3.5-100 OAL18 (810F4C5D7M3N6)

(R0X090) (29 MAR 74)

RN/L = 1.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-2.125	.06123	-.04042	.35927	-.04971	.08299	-.01391	.04116	-.01364	-.01349
.808	.05302	-.02634	.27356	-.02731	.05262	-.01449	.00753	-.01434	-.01379
3.964	.04762	-.01567	-.22143	-.00964	.04726	-.01433	-.00919	-.01402	-.01379
7.026	.04432	-.00250	.00773	.04561	.04561	-.01472	-.01156	-.01434	-.01361
9.944	.04241	.01037	.56173	.02963	.04829	-.01504	-.01473	-.01496	-.01684
13.844	.04062	.02990	.52720	.06646	.05670	-.01492	-.01363	-.01336	-.01636
17.926	.03997	.05530	.51343	.11604	.07956	-.01520	-.01615	-.01512	-.01601
21.039	.03993	.07779	.50597	.15421	.10206	-.01511	-.01630	-.01501	-.01600
24.100	.04048	.10002	.50364	.19251	.13047	-.01503	-.01619	-.01432	-.01549
GRADIENT	-.00219	.00404	-.03516	.00369	-.00256	-.00013	-.00021	-.00003	-.00003

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 29

AMES 3.5-160 OA11B (B10F4C507M3N8) (M07E18)

(RBX081) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6400 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 BOFLAP = -14.830
 ELEVON = .0000 AILRON = .0000

RN/L = 1.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
-2.161	-.06706	.06139	-.04446	.42301	-.06396	.06306	-.01329	.03963	-.01368	-.01430
.868	-.02126	.07330	-.03840	.01415	-.02336	.07297	-.01437	.01948	-.01309	-.01491
3.982	.02307	.06965	-.03302	1.17197	.01813	.07128	-.01410	-.00204	-.01446	-.01457
7.077	.07763	.06786	-.03020	.79670	.06693	.07693	-.01408	-.00649	-.01362	-.01482
9.942	.13900	.06635	-.02906	.73480	.12311	.09133	-.01427	-.01251	-.01392	-.01513
13.901	.24433	.06957	-.02741	.70007	.22065	.12628	-.01471	-.01467	-.01417	-.01546
17.934	.36935	.07259	-.02239	.66166	.32905	.18279	-.01496	-.01563	-.01482	-.01536
21.033	.47357	.07527	-.01867	.67424	.41500	.24022	-.01470	-.01545	-.01500	-.01442
24.073	.56018	.07774	-.01712	.67054	.49870	.30765	-.01451	-.01505	-.01392	-.01511
GRADIENT	.01472	-.00166	.00187	.12322	.01342	-.00203	-.00013	-.00661	-.00010	-.00001

AMES 3.5-160 OA11B (B10F4C507 M8 (M07E18) (VSR5)

(RBX082) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6400 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 RUDDER = .0000
 SPOBRK = 34.920 BOFLAP = -14.230
 ELEVON = .0000 AILRON = .0000

RN/L = 1.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
24.361	.61938	.07817	-.01820	.67030	.53199	.32670	-.01209	-.01312	-.01204	-.01278
27.318	.74510	.06192	-.01994	.66956	.62441	.41473	-.01194	-.01252	-.01135	-.01317
30.020	.86569	.06355	-.02277	.66939	.70693	.50726	-.01129	-.01149	-.01068	-.01233
34.121	1.02351	.06800	-.02931	.66994	.82200	.66380	-.00975	-.00941	-.00756	-.01070
39.051	1.27865	.06840	-.03998	.67117	.93744	.87434	-.00426	-.00403	-.00181	-.00362
43.846	1.47257	.06339	-.05216	.67266	1.00426	1.06022	.00952	.00610	.00637	.00466
49.624	1.66337	.07655	-.07058	.67498	1.03216	1.33200	.03373	.03026	.03169	.02967
52.922	1.77079	.07566	-.07337	.67480	1.00724	1.45838	.04509	.04437	.04304	.04408
GRADIENT	.04123	-.00018	-.00210	.00020	.01759	.04053	.00201	.00194	.00184	.00197

DATE 01 APR 74

TABULATED SOURCE DATA FOR OASIS (ARC 3.5-180)

PAGE 30

AMES 3.5-180 OASIS (B10F4C30FMS06) (N07E10) (VSR5)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4600 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = .000
 ELEVON = .000 AILRON = .000

RUN NO. 0/0 RN/L = 1.67 GRADIENT INTERVAL = -9.00/ 5.0

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
5.256	27.255	.02085	.08676	-.05063	.68213	.68906	.45482	-.02551	-.02614	-.02536	-.02460
5.256	29.946	.04853	.09075	-.05962	.68246	.77660	.52212	-.02639	-.02636	-.02443	-.02648
5.256	34.056	1.15017	.02219	-.07321	.68273	.90127	.72049	-.02465	-.02566	-.02266	-.02519
5.256	38.956	1.39478	.05209	-.09490	.68433	1.02553	.94693	-.02336	-.02366	-.02196	-.02266
5.256	43.842	1.62460	.09031	-.11642	.68561	1.10920	1.19045	-.02193	-.02463	-.01935	-.02161
5.256	49.025	1.82474	.08410	-.13116	.68569	1.15303	1.43282	.00935	.00053	-.00057	.00019
5.256	54.105	1.95072	.08057	-.12101	.68217	1.07843	1.62751	.03407	.02652	.02903	.03172
GRADIENT		.04351	-.00033	-.00306	.00017	.01560	.04483	.00014	.00172	.00172	.00192

AMES 3.5-180 OASIS (B10F4C30FMS06) (N07E10) (VSR5)

(RBK064) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4600 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = 13.750
 ELEVON = .000 AILRON = .000

RUN NO. 0/0 RN/L = 1.74 GRADIENT INTERVAL = -9.00/ 5.00

MACH	ALPHA	CN	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
5.257	24.329	.00718	.09443	-.07193	.69635	.60347	.37739	-.03063	-.03003	-.03063	-.02951
5.257	27.297	.04359	.09646	-.08243	.69493	.70449	.47437	-.03036	-.03009	-.03002	-.02936
5.257	29.976	.07001	.10170	-.09369	.69452	.78943	.57277	-.03164	-.03071	-.03064	-.03187
5.257	34.031	1.17245	.10556	-.11227	.69423	.91257	.74363	-.03036	-.03011	-.02836	-.03100
5.257	38.961	1.41802	.10781	-.13796	.69477	1.03449	.97582	-.02913	-.02934	-.02724	-.02950
5.257	43.891	1.64590	.10826	-.16167	.69511	1.11194	1.21631	-.02760	-.02837	-.02659	-.02791
5.257	49.041	1.83672	.10056	-.17804	.69422	1.12936	1.45446	.02105	-.02059	.00261	.01656
5.257	54.097	1.96330	.09626	-.16336	.68974	1.07333	1.64674	.03669	.02953	.03449	.03561
GRADIENT		.04386	.00006	-.00363	-.00013	.01719	.04404	.00214	.00172	.00192	.00204

DATE 01 APR 74

TABULATED SOURCE DATA FOR 0A11B (ARC 3.5-160)

PAGE 31

REFERENCE DATA

SRP = 2890.0000 SQ.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRP = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RUN NO. 0/0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CF1	CP2	CP3	CP4
5.256	-2.054	-.05971	.09602	-.03519	.44573	-.05521	.08866	-.03620	-.03555	-.03840	-.01671
5.256	1.046	.00094	.08960	-.03614	15.09670	-.00069	.08961	-.03569	-.03527	-.03804	-.01177
5.256	4.091	.06422	.08623	-.04259	.89525	.05840	.09065	-.03611	-.03594	-.03901	-.02603
5.256	7.137	.13639	.08905	-.05122	.79232	.12675	.10158	-.03669	-.03643	-.03914	-.02594
5.257	10.077	.22052	.08595	-.06283	.76185	.20206	.12321	-.03660	-.03640	-.03897	-.03266
5.257	13.965	.34921	.09133	-.07901	.74086	.31710	.17193	-.03631	-.03634	-.03901	-.03584
5.257	16.003	.49674	.09674	-.09574	.72662	.44442	.24614	-.03638	-.03633	-.03901	-.03584
5.257	21.110	.62126	.10291	-.10914	.72280	.54250	.31975	-.03586	-.03573	-.03903	-.03581
5.257	24.187	.74470	.10951	-.12207	.71859	.63445	.40501	-.03586	-.03566	-.03907	-.03590
5.257	26.204	.91513	.11698	-.14004	.71470	.73119	.53559	-.03586	-.03534	-.03277	-.03444
5.257	31.155	1.04412	.12183	-.15454	.71291	.83049	.64445	-.03459	-.03263	-.03252	-.03469
5.257	GRADIENT	.02316	-.00172	-.00120	.06744	.01649	-.00134	.00732	-.00006	-.00010	-.00183

PARAMETRIC DATA

BETA = .000 ELWN-L = 10.000
 ELWN-R = 10.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

(RBK065) (29 MAR 74)

AMES 3.5-160 0A11B (810F4C507M3N6) (A87E18) (VSR5)

(RBK066) (29 MAR 74)

REFERENCE DATA

SRP = 2890.0000 SQ.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRP = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RUN NO. 0/0 RN/L = 2.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CF1	CP2	CP3	CP4
5.256	-2.564	-.12369	.11599	.00605	.67746	-.11856	.12141	-.03526	-.03555	-.03818	-.01166
5.257	.441	-.05738	.10310	.00164	.67019	-.05816	.10266	-.03530	-.03526	-.03733	-.00249
5.257	3.533	.00635	.09514	-.00001	.70559	.00047	.09555	-.03672	-.03709	-.03863	-.02084
5.256	6.585	.07528	.08984	-.00309	.67468	.06449	.09788	-.03635	-.03651	-.04013	-.02428
5.256	9.466	.14739	.08660	-.00517	.67252	.13110	.10971	-.03916	-.03952	-.04120	-.02884
5.256	13.380	.26084	.08469	-.00609	.66834	.23421	.14268	-.03963	-.03954	-.03897	-.03465
5.256	19.560	.45764	.08470	-.00241	.65911	.40287	.23303	-.03987	-.04004	-.03953	-.03948
5.256	23.574	.59720	.08663	.00782	.65531	.51272	.31824	-.03930	-.03955	-.03940	-.03934
5.256	26.540	.70722	.08669	.01067	.65449	.59507	.39555	-.03907	-.03999	-.03831	-.03691
5.256	30.437	.85537	.09082	.01303	.64454	.69149	.51162	-.03682	-.03771	-.03730	-.03651
5.256	GRADIENT	.02136	-.00342	-.00112	.00465	.01953	-.00427	-.00024	-.00025	-.00006	-.00153

BETA = .000 ELWN-L = -40.000
 ELWN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

PARAMETRIC DATA

AES 3.5-100 OA118 (810F4C507M3N8) (N87E10) (V8R5)

(RBK067) (29 MAR 74)

REFERENCE DATA

SRCT = 2000.0000 50.FT. XPRP = 1076.4000 IN.
 LRCT = 474.8100 IN. YPRP = .0000 IN.
 BRCT = 936.0000 IN. ZPRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 ALLRON = .000

RUN NO. O/D RV/L = 2.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
5.237	10.795	.00034	.07690	-.02946	.71256	.18245	.11297	-.03784	-.03792	-.03947	-.03823
5.237	15.929	.36534	.07640	-.03275	.09204	.32980	.17566	-.03669	-.03892	-.03821	-.03672
5.236	18.755	.46521	.07906	-.03328	.60356	.41463	.22520	-.03668	-.03683	-.03781	-.03932
5.236	21.573	.56961	.08205	-.03432	.68153	.49954	.26574	-.03610	-.03637	-.03703	-.03677
5.236	24.379	.66959	.08452	-.03648	.67956	.56956	.36261	-.03787	-.03821	-.03648	-.03648
5.236	27.668	.81379	.08686	-.04159	.67628	.67979	.45448	-.03721	-.03758	-.03697	-.03606
5.236	30.750	.94482	.08930	-.04603	.67771	.76632	.55983	-.03707	-.03787	-.03667	-.03628
5.236	35.734	1.15998	.09308	-.05746	.67770	.86901	.75055	-.03928	-.03745	-.03482	-.03667
5.236	40.683	1.37276	.0716	-.06998	.67622	.96416	.96097	-.02444	-.02556	-.02286	-.02456
5.235	GRADIENT	.03965	.00046	-.00132	-.00094	.02742	.02877	.00035	.00029	.00040	.00033

REFERENCE DATA

SRCT = 2000.0000 50.FT. XPRP = 1076.4000 IN.
 LRCT = 474.8100 IN. YPRP = .0000 IN.
 BRCT = 936.0000 IN. ZPRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 ALLRON = .000

AES 3.5-100 OA118 (810F4C507M3N8) (N87E10) (V8R5)

(RBK068) (29 MAR 74)

RUN NO. O/D RV/L = 2.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ON	CA	CLM	XCP/L	CL	CD	CP1	CP2	CP3	CP4
5.237	9.560	-.16462	.11243	-.03186	.59828	-.16386	.14096	-.03097	-.02990	-.03539	-.00248
5.237	6.287	-.13644	.10534	-.03018	.58091	-.12409	.11965	-.03315	-.03248	-.03725	-.00999
5.237	2.250	-.07066	.09378	-.02612	.52784	-.06894	.09646	-.03461	-.03365	-.03778	-.00981
5.236	.615	-.02101	.08686	-.02445	.24429	-.02194	.08645	-.03391	-.03266	-.03674	-.01759
5.236	3.577	.03474	.08171	-.02446	.91175	.02998	.08372	-.03419	-.03291	-.03605	-.02845
5.234	6.699	.09632	.07847	-.02541	.75239	.06849	.08941	-.03468	-.03363	-.03706	-.03404
5.236	9.784	.17186	.07715	-.02693	.72017	.15827	.10524	-.03593	-.03471	-.03713	-.03508
5.236	12.695	.23032	.07704	-.03209	.70593	.22727	.13017	-.03641	-.03477	-.03630	-.03649
5.236	15.748	.34360	.07552	-.03450	.69618	.30670	.16807	-.03668	-.03492	-.03446	-.03664
5.236	18.724	.43972	.08040	-.03536	.68902	.36685	.21801	-.03649	-.03465	-.02960	-.03684
5.236	GRADIENT	.01810	-.00207	.00026	.06676	.01657	-.00216	.00008	.00016	.00030	-.00320

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 33

AME3 3.5-160 OA118 (810F4C507M3N6) (M87E18) (VSR5) (RBX068) (29 MAR 74)

REFERENCE DATA

SRZF = 2890.0000 SQ.FT. XMRP = 1076.4000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRZF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

RUN NO. 0/0 RN/L = 2.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CL4	KCP/L	CL	CD	CP1	CP2	CP3	CP4
9.267	-9.366	-1.8315	.11100	-.03016	.60107	-.16260	.13939	-.03269	-.03143	-.03686	-.00633
9.267	-6.280	-1.13611	.10401	-.02631	.56562	-.12369	.11829	-.03503	-.03423	-.03879	-.01210
9.266	-2.251	-.07108	.09271	-.02499	.53430	-.06738	.09543	-.03644	-.03562	-.04006	-.01141
9.265	.626	-.02166	.06335	-.02408	.26233	-.02259	.08511	-.03566	-.03464	-.03857	-.01933
9.264	3.544	.03230	.06037	-.02416	.2768	.02727	.08221	-.03597	-.03461	-.03796	-.03068
9.262	6.702	.09318	.07736	-.02542	.73546	.08550	.08736	-.03690	-.03354	-.03863	-.03611
9.260	9.702	.16074	.07603	-.02667	.72146	.15140	.10325	-.03761	-.03638	-.03913	-.03690
9.258	12.666	.24343	.07604	-.03135	.70633	.22078	.12764	-.03613	-.03661	-.03810	-.03640
9.256	15.736	.33178	.07723	-.03336	.69594	.29639	.16433	-.03829	-.03665	-.03666	-.03849
9.254	18.756	.42315	.07879	-.03381	.68642	.37724	.21130	-.03608	-.03604	-.03171	-.03646
GRADIENT	.01764	-.00213	-.00314	.00622	.01633	-.00228	.00008	.00008	.00017	.00037	-.00333

AME3 3.5-160 OA118 (810F4C507M3N6) (M87E18) (VSR5)

(ABX005) (29 MAR 74)

REFERENCE DATA

SRZF = 2890.0000 SQ.FT. XMRP = 1076.4000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRZF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

RN/L = 2.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320
 ALPHA
 L/D
 GRADIENT

ALPHA	L/D	CY	CYN	CBL
-7.004	-.63427	-.06358	.00016	-.00002
1.907	-.48799	-.05865	-.00092	-.00117
3.614	.02006	-.05565	-.00161	-.00215
7.629	.59493	-.04926	-.00285	-.00276
10.439	1.09166	-.04565	-.00366	-.00316
GRADIENT	.17248	.00203	-.00041	-.00044

DATE 01 APR 74

TABULATED SOURCE DATA FOR 0A11B (ARC 3.5-100)

PAGE 34

AMES 3.5-100 0A11B (B10F4C50/MSN6) (M87E18) (VSR5)

(ABX006) (29 MAR 74)

REFERENCE DATA

SREF = 2990.0000 94.17.
 LREF = 474.8100 IN.
 BREF = 936.6000 IN.
 SCALE = .0190

XREF = 1076.4800 IN.
 YREF = .0000 IN.
 ZREF = 400.0000 IN.
 BETA = 5.000
 ELW-L = .000
 ELW-R = .000
 RUDDER = .000
 SPOBRK = 54.920
 BDFLAP = -14.250
 ELEVON = .000
 ATLON = .000

RN/L = 2.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
9.154	1.19597	-.04555	-.00390	-.00331
13.972	1.62063	-.04224	-.00498	-.00359
17.015	1.72669	-.04153	-.00362	-.00410
20.140	1.69924	-.04193	-.00398	-.00492
24.167	1.58850	-.04224	-.00450	-.00610
GRADIENT	.02502	.00020	-.00016	-.00019

AMES 3.5-100 0A11B (B10F4C50/MSN6) (M87E18) (VSR5)

(ABX007) (29 MAR 74)

REFERENCE DATA

SREF = 2990.0000 94.17.
 LREF = 474.8100 IN.
 BREF = 936.6000 IN.
 SCALE = .0190

XREF = 1076.4800 IN.
 YREF = .0000 IN.
 ZREF = 400.0000 IN.
 BETA = .000
 ELW-L = .000
 ELW-R = .000
 RUDDER = .000
 SPOBRK = 54.920
 BDFLAP = -14.250
 ELEVON = .000
 ATLON = .000

RN/L = 2.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.222	-.68199	.00314	.00024	-.00011
1.007	-.29854	.00317	.00024	-.00007
4.017	.19928	.00230	.00039	.00002
7.102	.76804	.00221	.00050	.00015
9.958	1.28906	.00216	.00077	.00017
GRADIENT	.15108	-.00014	.00003	.00002

PARAMETRIC DATA

PARAMETRIC DATA

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

DATE 01 APR 74

(ABX008) (29 MAR 74)

AMES 3.5-160 OA11B (B10F4C5D7M3N8) (M87E18) (VSR5)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320
 ALPHA
 9.674
 13.421
 16.242
 19.397
 23.152
 GRADIENT

L/D
 1.33134
 1.73149
 1.80495
 1.76490
 1.64847
 .02023

CY
 .00079
 .00129
 .00102
 .00095
 .00063
 -.00002

CBL
 -.00014
 -.00028
 .00001
 .00001
 -.00010
 .00001

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320
 ALPHA
 -2.289
 .982
 4.047
 7.067
 9.912
 GRADIENT

L/D
 -.92569
 -.61079
 -.13751
 .43356
 1.00278
 .12415

CY
 .00369
 .00296
 .00232
 .00206
 .00144
 -.00022

CBL
 -.00017
 -.00023
 .00001
 .00019
 .00016
 .00003

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

(ABX009) (29 MAR 74)

AMES 3.5-160 OA11B (B10F4C5D7M3N8) (M87E18) (VSR5)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 36

AMES 3.5-160 OA11B (B1CF4C507H3N6) (A87E18) (VSR5)

(A8X010) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6900 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RM/L = 2.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
9.860	1.03976	.00174	.00030	.00006
13.808	1.50791	.00167	.00041	.00026
16.932	1.64284	.00145	.00056	.00044
20.052	1.64236	.00175	.00044	.00052
24.077	1.54139	.00071	.00041	.00043
GRADIENT	.03300	-.00006	.00000	.00003

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6900 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RM/L = 2.14 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.936	-.64381	.00301	.00034	-.00021
.955	-.23236	.00260	.00041	-.00019
3.969	.31462	.00200	.00054	-.00015
7.020	.91378	.00179	.00063	-.00004
9.861	1.40181	.00069	.00079	-.00006
GRADIENT	.16245	-.00017	.00003	.00001

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

AMES 3.5-160 OA11B (B1CF4C507H3N6) (A87E18) (VSR5)

(A8X011) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-180)

PAGE 37

(ABX012) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 50. FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
9.664	1.39810	.00196	.00077	-.00012
13.026	1.76181	.00110	.00094	-.00020
16.093	1.81310	.00066	.00091	-.00010
19.265	1.74314	.00062	.00094	-.00001
23.064	1.60154	-.00013	.00125	-.00013
GRADIENT	.01121	-.00014	.00003	.00000

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

REFERENCE DATA

SREF = 2890.0000 50. FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.866	-.70564	.00281	.00009	-.00015
.955	-.33904	.00270	.00024	-.00003
3.934	.18049	.00157	.00034	.00007
7.010	.78219	.00176	.00039	.00022
9.888	1.27273	.00169	.00040	.00028
13.821	1.67860	.00113	.00035	.00034
17.881	1.75230	.00114	.00046	.00046
21.047	1.67945	.00077	.00042	.00052
24.156	1.57017	.00050	.00056	.00048
GRADIENT	.15298	-.00021	.00004	.00004

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = .000 AILRON = .000

(ABX013) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-180)

PAGE 34

AVES 3.5-180 OA11B (B10F4C507M3N6) (N87E18) (VSR5)

(A80D14) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 58. FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 SOFLAP = .000
 ELEVON = .000 AILRON = .000

RN/L = 1.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CEL
-1.901	-66909	.00344	.00020	-.00015
.955	-32672	.00360	.00013	-.00004
3.987	.19797	.00304	.00039	.00004
7.031	.76406	.00289	.00045	.00024
9.835	1.27450	.00251	.00057	.00021
13.491	1.70616	.00152	.00069	.00009
17.178	1.81115	.00169	.00056	.00035
20.368	1.74775	.00186	.00045	.00032
23.493	1.63634	.00106	.00065	.00045
GRADIENT	.15088	-.00007	.00003	.00003

REFERENCE DATA

SREF = 2890.0000 58. FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 ELVN-L = 5.000
 ELVN-R = -15.000 RUDDER = .000
 SPOBRK = 54.920 SOFLAP = -14.250
 ELEVON = -5.000 AILRON = 10.000

AVES 3.5-180 OA11B (B10F4C507M3N6) (N87E18) (VSR5)

(A80D15) (29 MAR 74)

RN/L = 2.20 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CEL
-1.942	-74499	.00352	.00039	.00169
.937	-37364	.00305	.00025	.00162
3.943	.14138	.00305	.00026	.00194
6.966	.72617	.00293	.00012	.00257
9.888	1.25408	.00243	.00019	.00330
13.874	1.68441	.00210	.00011	.00452
17.885	1.76284	.00225	-.00039	.00622
21.049	1.69610	.00227	-.00072	.00737
24.147	1.59345	.00171	-.00084	.00835
GRADIENT	.15068	-.00008	-.00002	.00004

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-180)

PAGE 39

AWES 3.5-180 OA11B (B10F4C5D7M3N8) (W87E18) (VSR5)

(ABX018) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.8800 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RN/L = 2.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.871	-78024	.00368	.00037	.00098
.983	-37041	.00322	.00035	.00080
4.044	.12982	.00293	.00025	.00074
7.086	.70776	.00306	.00037	.00099
9.861	1.17859	.00279	.00056	.00118
13.647	1.62212	.00301	.00071	.00155
25.057	1.69892	.00293	.00034	.00247
25.109	1.54567	.00247	.00028	.00308
29.025	1.39982	.00230	-.00002	.00378
GRADIENT	.15395	-.00013	-.00002	-.00004

PARAMETRIC DATA

BETA = .000 ELVN-L = -5.000
 ELVN-R = -15.000 RUDDER = .000
 SPDBRK = 54.920 BDFLAP = -14.250
 ELEVON = -10.000 ATLON = 5.000

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.8800 IN. ZREF = 400.0000 IN.
 SCALE = .0150

RN/L = 2.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.747	-76003	.00326	.00078	.00117
-1.734	-8.29659	-.00018	.00006	-.00005
4.083	.14849	.00255	.00066	.00088
7.159	.71072	.00244	.00065	.00083
9.999	1.19712	.00261	.00075	.00080
13.949	1.60497	.00316	.00078	.00105
20.256	1.67319	.00255	.00047	.00132
25.284	1.52405	.00185	.00054	.00168
29.124	1.38541	.00192	.00012	.00212
GRADIENT	.80096	.00017	.00004	.00005

PARAMETRIC DATA

BETA = .000 ELVN-L = -15.000
 ELVN-R = -25.000 RUDDER = .000
 SPDBRK = 54.920 BDFLAP = -14.250
 ELEVON = -20.000 ATLON = 5.000

AWES 3.5-180 OA11B (B10F4C5D7M3N8) (W87E18) (VSR5)

(ABX017) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 40

AVES 3.5-160 OA11B (B10F4C507M3N6) (W07E18) (V5R5)

(ABX018) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -20.000
 SPDRK = 54.920 BDFLAP = -14.250
 ELEVON = .000 AILRON = .000

RM/L = 2.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.751	-.69920	-.00722	.00368	-.00309
1.077	-.32136	-.00591	.00476	-.00240
4.057	.14916	-.00544	.00449	-.00211
7.108	.72789	-.00341	.00366	-.00155
10.005	1.25107	-.00177	.00278	-.00102
13.953	1.63401	-.00098	.00230	-.00088
18.038	1.72848	.00025	.00199	-.00056
21.191	1.67630	.00017	.00169	-.00055
24.274	1.57730	.00008	.00153	-.00056
GRADIENT	.14616	.00031	-.00020	.00017

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6800 IN. ZREF = 400.0000 IN.
 SCALE = .0190

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPDRK = 54.920 BDFLAP = -14.250
 ELEVON = .000 AILRON = .000

RM/L = 1.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.806	-.71695	-.00205	.00331	-.00162
1.036	-.32793	-.00096	.00275	-.00137
4.017	.17002	-.00156	.00261	-.00116
7.052	.74706	-.00072	.00222	-.00082
9.951	1.25205	-.00006	.00184	-.00053
13.885	1.64482	.00016	.00148	-.00029
17.991	1.73636	-.00017	.00135	-.00012
21.136	1.66184	-.00051	.00123	-.00009
24.193	1.58304	-.00070	.00111	-.00016
GRADIENT	.19240	.00008	-.00012	.00011

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-16.0)

PAGE 41

AVES 3.5-160 OA11B (B1074C5D7M3N8) (M87E18) (VSR5)

(ABX020) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0190

RM/L = 2.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.649	-72078	.00196	.00081	-.00051
1.000	-33662	.00228	.00071	-.00037
3.998	.20834	.00165	.00077	-.00022
7.010	.79247	.00162	.00079	-.00006
9.905	1.28540	.00135	.00065	.00002
13.885	1.68482	.00144	.00066	.00001
17.967	1.75858	.00149	.00073	.00010
21.141	1.69197	.00120	.00073	.00021
24.193	1.56925	.00076	.00081	-.00000
GRADIENT	.15911	-.00002	-.00001	.00005

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPOBRK = .000 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0190

RM/L = 1.94 GRADIENT INTERVAL = -9.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-1.645	-70813	.00036	.00206	-.00115
1.036	-31120	.00100	.00161	-.00078
4.011	.20249	.00052	.00055	-.00060
7.044	.79082	.00077	.00149	-.00031
9.943	1.27197	.00038	.00145	-.00020
13.885	1.67206	.00077	.00124	-.00002
17.958	1.75533	.00060	.00109	.00020
21.122	1.69508	.00047	.00091	.00014
24.191	1.58770	.00048	.00089	.00025
GRADIENT	.15559	.00002	-.00009	.00009

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPOBRK = 24.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

AVES 3.5-160 OA11B (B1074C5D7M3N8) (M87E18) (VSR5)

(ABX021) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.3-180)

PAGE 42

AMES 3.3-180 OA118 (B10F4C5D7M3N0) (M07E10) (VSR5)

(ABX022) (29 MAR 74)

REFERENCE DATA

SRCP = 2690.0000 SQ FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 ORCP = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.190	1.56901	-.00246	.00108	-.00182
27.196	1.46343	-.00248	.00075	-.00108
29.973	1.36050	-.00304	.00056	.00110
33.916	1.21977	-.00333	.00029	.00064
39.004	1.03326	-.00362	.00014	.00095
42.967	.93631	-.00432	-.00019	.00093
47.108	.82631	-.00421	-.00028	.00133
51.122	.72420	-.00221	-.00099	.00132
GRADIENT	-.03162	-.00003	-.00007	.00011

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPDBRK = 24.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

AMES 3.3-180 OA118 (B10F4C5D7M3N0) (M07E10) (VSR5)

(ABX023) (29 MAR 74)

REFERENCE DATA

SRCP = 2690.0000 SQ FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 ORCP = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.154	1.62808	-.00280	.00041	.00039
27.260	1.50008	-.00266	.00030	.00045
30.026	1.36790	-.00361	.00044	.00047
33.905	1.24193	-.00369	.00029	.00072
39.008	1.06729	-.00433	.00005	.00092
43.015	.94841	-.00546	-.00016	.00094
47.135	.83390	-.00410	-.00042	.00123
51.169	.72905	-.00377	-.00084	.00164
GRADIENT	-.03324	-.00006	-.00004	.00004

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPDBRK = 24.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-16N)

PAGE 43

AMES 3.5-160 OA11B (810F4C5D7M3N6) (M07E16) (VSR5)

(ABX024) (29 MAR 74)

REFERENCE DATA

SRCT = 2690.0000 50.FT. XMRP = 1076.4800 IN.
 LRCT = 474.8100 IN. YMRP = .0000 IN.
 BRCT = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0190

RN/L = 1.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.222	1.62016	-.00270	.00029	.00054
27.198	1.50039	-.00250	.00026	.00060
30.040	1.38750	-.00225	.00021	.00075
33.916	1.24117	-.00287	.00011	.00086
39.011	1.06798	-.00394	-.00003	.00121
42.961	.94911	-.00451	-.00012	.00110
47.134	.83379	-.00386	-.00031	.00119
51.182	.72937	-.00307	-.00091	.00147
GRADIENT	-.03315	-.00005	-.00004	.00003

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPDRK = .000 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

PARAMETRIC DATA

REFERENCE DATA

SRCT = 2690.0000 50.FT. XMRP = 1076.4800 IN.
 LRCT = 474.8100 IN. YMRP = .0000 IN.
 BRCT = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0190

RN/L = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.195	1.61989	-.00344	.00072	.00016
27.206	1.49814	-.00362	.00066	.00020
30.013	1.38558	-.00396	.00064	.00029
33.923	1.23974	-.00467	.00058	.00007
39.008	1.06766	-.00493	.00016	.00063
42.943	.94966	-.00548	.00011	.00044
47.066	.83879	-.00756	.00005	.00062
51.098	.73220	-.00485	-.00003	-.00003
GRADIENT	-.03306	-.00010	-.00004	.00001

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -10.000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

PARAMETRIC DATA

(ABX025) (29 MAR 74)

AMES 3.5-160 OA11B (810F4C5D7M3N6) (M07E16) (VSR5)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 44

AMES 3.5-160 OA118 (B10F4C507M3N6) (M07E16) (V0R5)

(ASX026) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 ZREF = 936.8600 IN. ZREF = 400.0100 IN.
 SCALE = .0150

RM/L = 2.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.340	1.80945	-.00444	.00064	.00005
27.346	1.46849	-.00425	.00076	.00004
30.172	1.37712	-.00312	.00066	.00012
34.075	1.23216	-.00317	.00051	.00020
39.156	1.06196	-.00316	.00000	.00076
43.117	.94474	-.00336	-.00037	.00069
47.258	.83072	-.00421	-.00056	.00107
51.333	.72465	-.00323	-.00115	.00105
GRADIENT	-.03281	.00003	-.00006	.00004

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = -20.000
 SPOBRK = 54.980 BOFLAP = -14.230
 ELEVON = .000 AILRON = .000

PARAMETRIC DATA

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 ZREF = 936.8600 IN. ZREF = 400.0100 IN.
 SCALE = .0150

RM/L = 1.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
26.276	1.45263	-.00277	-.00019	.00024
32.165	1.30179	-.00322	-.00026	.00043
35.223	1.19435	-.00366	-.00041	.00072
36.075	1.10066	-.00367	-.00059	.00063
40.692	1.01451	-.00387	-.00062	.00008
43.653	.92973	-.00496	-.00047	.00040
46.942	.79494	-.00517	-.00097	.00093
54.157	.66652	-.00492	-.00134	.00025
GRADIENT	-.03012	-.00010	-.00004	.00018

BETA = .000 ELVN-L = -15.000
 ELVN-R = -25.000 RUDDER = .000
 SPOBRK = 54.980 BOFLAP = -14.230
 ELEVON = -20.000 AILRON = 5.000

PARAMETRIC DATA

(ASX027) (29 MAR 74)

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

(ABX026) (29 MAR 74)

AMES 3.5-160 OA11B (B10F4CSDTH3N8) (M07E10) (V5R5)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	7.320	ALPHA	L/D	CY	CYN	CBL
	26.294	1.45677	-.00462	-.00077	.00217	.00217
	32.210	1.30709	-.00507	-.00093	.00436	.00436
	35.237	1.19972	-.00522	-.00118	.00507	.00507
	36.082	1.10527	-.00576	-.00133	.00577	.00577
	40.904	1.01750	-.00615	-.00159	.00647	.00647
	43.681	.93115	-.00700	-.00136	.00712	.00712
	46.956	.79693	-.00770	-.00106	.00740	.00740
	54.141	.66775	-.00493	-.00286	.00744	.00744
GRADIENT		-.03037	-.00006	-.00007	.00019	.00019

PARAMETRIC DATA

TA = .0000 ELVN-L = -5.0000
 ELVN-R = -15.0000 RUDDER = .0000
 SPODRK = 54.920 BOFLAP = -14.250
 ELEVON = -10.0000 AILRON = 5.0000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 2.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	7.320	ALPHA	L/D	CY	CYN	CBL
	24.551	1.59999	-.00375	-.00109	.00328	.00328
	27.475	1.46446	-.00402	-.00149	.00506	.00506
	30.157	1.37796	-.00512	-.00181	.00726	.00726
	34.223	1.22701	-.00521	-.00241	.00954	.00954
	39.080	1.06503	-.00652	-.00294	.00989	.00989
	43.955	.92334	-.00668	-.00341	.01066	.01066
	49.004	.78653	-.00681	-.00324	.01125	.01125
	54.194	.65777	-.00786	-.00424	.01416	.01416
GRADIENT		-.03186	-.00016	-.00010	.00032	.00032

PARAMETRIC DATA

BETA = .0000 ELVN-L = 5.0000
 ELVN-R = -5.0000 RUDDER = .0000
 SPODRK = 54.920 BOFLAP = -14.250
 ELEVON = .0000 AILRON = 5.0000

(ABX029) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-180)

PAGE 46

(ABX030) (29 MAR 74)

AMES 3.5-180 OA118 (B10F4C507H3N8) (M07E18) (VSR5)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CSL
24.536	1.61012	-.00491	-.00140	.00397
27.395	1.46667	-.00547	-.00155	.00641
30.044	1.38215	-.00569	-.00186	.00738
34.171	1.22917	-.00629	-.00235	.00658
39.064	1.06502	-.00727	-.00291	.00993
43.692	.92271	-.00770	-.00344	.01055
49.052	.78566	-.00976	-.00329	.01124
54.218	.65699	-.00846	-.00429	.01406
GRADIENT	-.03187	-.00015	-.00009	.00025

PARAMETRIC DATA

BETA = .000 ELVN-L = 9.000
 ELVN-R = -5.000 RUDDER = .000
 SPDRK = 54.920 BDFLAF = -14.230
 ELEVON = .000 AILRON = 5.000

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CSL
24.502	1.53632	-.00509	-.00093	.00211
27.397	1.42254	-.00527	-.00094	.00226
30.096	1.31925	-.00529	-.00077	.00263
34.116	1.17703	-.00529	-.00104	.00286
39.031	1.02479	-.00580	-.00137	.00330
43.640	.88278	-.00670	-.00185	.00391
49.046	.74719	-.00825	-.00221	.00469
54.232	.63437	-.00363	-.00343	-.00329
GRADIENT	-.03046	-.00062	-.00013	-.00007

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BDFLAF = 13.750
 ELEVON = 10.000 AILRON = .000

(ABX031) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OAL18 (ARC 3.5-180)

PAGE 47

AMES 3.5-180 OAL18 (B10F4C5D7M3N8) (M87E18) (VSR5)

(ABX032) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LRCP = 474.8100 IN. YMRP = .0000 IN.
 BRCP = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.546	1.58482	-.00445	.00009	-.00019
27.447	1.46302	-.00439	.00012	-.00038
30.093	1.38137	-.00485	.00020	-.00025
34.138	1.21232	-.00494	.00009	-.00012
39.018	1.05321	-.00521	-.00013	-.00036
43.947	.90487	-.00557	-.00023	.00012
49.009	.77050	-.00682	-.00023	.00048
53.044	.67099	-.00441	-.00106	-.00005
GRADIENT	-.03201	-.00004	-.00003	.00002

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LRCP = 474.8100 IN. YMRP = .0000 IN.
 BRCP = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 2.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.513	1.61277	-.00409	.00019	-.00037
27.457	1.48888	-.00430	.00028	-.00054
30.116	1.38247	-.00425	.00029	-.00042
34.170	1.23160	-.00466	.00018	-.00046
39.082	1.06667	-.00467	-.00024	.00000
43.877	.92429	-.00537	-.00024	-.00034
49.026	.78595	-.00682	-.00003	.00012
53.083	.68388	-.00490	-.00056	-.00032
GRADIENT	-.03241	-.00006	-.00003	.00001

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = .000
 ELEVON = .000 AILRON = .000

AMES 3.5-180 OAL18 (B10F4C5D7M3N8) (M87E18) (VSR5)

(ABX033) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 48

AMES 3.5-160 OA11B (B10F4C507M3N8) (M87E18) (VSR5)

(ABX034) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6600 IN. ZREF = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 ALLRON = .000

RM/L = 1.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.522	1.54804	-.00452	.00053	-.00009
27.463	1.43034	-.00483	.00034	-.00010
30.101	1.32674	-.00503	.00049	.00009
34.152	1.17704	-.00506	.00044	.00022
39.006	1.02507	-.00495	.00023	-.00005
43.888	.88063	-.00485	.00019	.00042
49.009	.74688	-.00445	-.00001	.00084
53.047	.65131	-.00366	-.00001	.00342
GRADIENT	-.03140	-.00008	-.00002	.00009

AMES 3.5-160 OA11B (B10F4C507M3N8) (M87E18) (VSR5)

(ABX035) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XREF = 1076.4800 IN.
 LREF = 474.8100 IN. YREF = .0000 IN.
 BREF = 936.6600 IN. ZREF = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 ALLRON = .000

RM/L = 1.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
24.501	1.57175	.00606	-.00115	-.00904
27.443	1.46500	.00664	-.00124	-.00926
30.214	1.36031	.00690	-.00170	-.01018
34.081	1.22331	.01186	-.00221	-.01078
38.056	1.09156	.01581	-.00269	-.01106
42.364	.96069	.01983	-.00392	-.01079
GRADIENT	-.03439	.00076	-.00015	-.00015

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-180)

PAGE 49

AMES 3.5-180 OA11B (B10F4C5D7M3U8) (W8TE18) (VSR5)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BREF = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RN/L = 1.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/O	CY	CYN	CBL
24.736	1.57193	-.00149	.00043	.00029
27.627	1.46262	-.00167	.00042	-.00014
30.104	1.36888	-.00229	.00059	-.00057
34.206	1.22125	-.00180	.00054	.00012
36.076	1.09346	-.00155	.00053	-.00064
41.851	.97965	-.00072	.00047	.00033
GRADIENT	-.03474	.00004	.00000	-.00000

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 RUDDER = .000
SPDRK = 54.920 BOFLAP = -14.290
ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BREF = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RN/L = 1.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/O	CY	CYN	CBL
24.622	1.58705	-.01275	-.00031	-.00081
27.531	1.47623	-.01433	-.00018	-.00121
30.190	1.37356	-.01449	-.00039	-.00139
34.179	1.22583	-.01551	-.00062	-.00127
36.105	1.09441	-.01629	-.00066	-.00102
41.872	.97964	-.01667	-.00103	-.00214
GRADIENT	-.03541	-.00021	-.00004	-.00000

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 RUDDER = .000
SPDRK = 54.920 BOFLAP = .000
ELEVON = .000 AILRON = .000

(ABX037) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 30

AMES 3.5-160 OA11B (810F4C9C7M5N8) (M87E18) (VSR5)

(ABX039) (29 MAR 74)

REFERENCE DATA

SREF = 2990.0000 90.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SFCBRK = 54.920 BOFLAP = 13.750
 ELEVON = .000 ATLON = .000

RN/L = 1.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
24.612	1.56897	-.01484	-.00006	-.00094
27.496	1.45727	-.01592	-.00001	-.00137
30.205	1.35244	-.01806	-.00015	-.00124
34.168	1.21663	-.01714	-.00024	-.00179
36.096	1.07571	-.01766	-.00064	-.00071
41.857	.96287	-.01746	-.00087	-.00211
GRADIENT	-.03532	-.00016	-.00005	-.00004

AMES 3.5-160 OA11B (810F4C9C7M5N8) (M87E18) (VSR5)

(ABX039) (29 MAR 74)

REFERENCE DATA

SREF = 2990.0000 90.FT. YMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SFCBRK = 54.920 BOFLAP = 13.750
 ELEVON = 10.000 ATLON = .000

RN/L = 1.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
24.618	1.53852	-.01651	.00020	-.00114
27.466	1.42535	-.01661	.00023	-.00078
30.181	1.32125	-.01740	.00018	-.00111
34.182	1.17529	-.01864	.00013	-.00147
36.148	1.04888	-.01714	-.00059	-.00109
41.878	.93641	-.01935	-.00044	-.00277
GRADIENT	-.03493	-.00014	-.00005	-.00008

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 31

AMES 3.5-160 OA11B (B10F4C5D7M3N8) (M87E18) (VSR5)

(ABX040) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BR.F = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
24.571	1.54299	-.01452	-.00063	-.00036
27.463	1.44602	-.01477	-.00103	-.00014
30.129	1.34733	-.01467	-.00124	-.00059
34.138	1.21624	-.01636	-.00135	-.00118
38.072	1.08055	-.01706	-.00168	-.00089
41.839	.96823	-.01738	-.00200	-.00061
GRADIENT	-.03359	-.00019	-.00006	-.00003

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BR.F = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
-1.841	-.92788	.00351	.00014	-.00027
1.027	-.62259	.00277	.00034	-.00024
4.015	-.17369	.00132	.00040	-.00010
9.017	.80617	-.00028	.00043	.00017
13.943	1.50307	-.00183	.00039	.00039
19.163	1.65929	-.00349	.00019	.00136
24.253	1.53664	-.00474	.00007	.00043
GRADIENT	.12895	-.00037	.00004	.00003

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 AILRON = .000

AMES 3.5-160 OA11B (B10F4C5D7M3N8) (M87E18) (VSR5)

(ABX041) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR 0A11B (ARC 3.5-160)

PAGE 32

AVES 3.5-160 0A11B (B10F4C507M3M6) (M87E16) (VSR5)

(ABX042) (29 MAR 74)

REFERENCE DATA

SPOT = 2090.0000 SQ.FT. YARP = 1076.4800 IN.
 LREF = 474.8100 IN. YARP = .0000 IN.
 DREF = 936.6800 IN. ZARP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
-1.769	-.57712	.00385	.00032	-.00013
1.090	-.16626	.00348	.00031	-.00013
4.081	.32796	.00244	.00059	-.00009
9.078	1.23076	.00070	.00071	-.00016
13.960	1.71792	-.00075	.00063	-.00038
19.097	1.70987	-.00253	.00082	-.00043
24.325	1.53086	-.00424	.00096	-.00062
GRADIENT	.15486	-.00024	.00001	.00001

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = 13.730
 ELEVON = 10.000 AILRON = .000

REFERENCE DATA

SPOT = 2090.0000 SQ.FT. YARP = 1076.4800 IN.
 LREF = 474.8100 IN. YARP = .0000 IN.
 DREF = 936.6800 IN. ZARP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
-2.016	-.69679	.00249	.00057	-.00018
1.088	-.32512	.00179	.00052	-.00011
4.129	.16526	.00105	.00046	-.00003
9.038	1.08296	-.00005	.00053	.00005
13.932	1.66310	-.00124	.00050	.00004
19.174	1.73671	-.00321	.00034	-.00004
24.247	1.57765	-.00562	.00029	-.00050
GRADIENT	.14022	-.00023	-.00002	.00002

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

AVES 3.5-160 0A11B (B10F4C507M3M6) (M87E16) (VSR5)

(ABX043) (29 MAR 74)

TABULATED SOURCE DATA FOR OAL18 (ARC 3.5-160)

(ABX044) (29 MAR 74)

AMES 3.5-160 OAL18 (B10F4CSD7M3N8) (W87E18) (VSR5)

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
ELVN-R = .000 RUDDER = .000
SPDRK = 54.920 BDFLAP = -14.250
ELEVON = .000 AILRON = .000

REFERENCE DATA

SRZ = 2690.0000 56.17. XMRP = 1076.4800 IN.
LRZ = 474.6100 IN. YMRP = .0000 IN.
BRZ = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0190

RV/L = 2.10 GRADIENT INTERVAL/L = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
-1.975	-0.82075	-0.05959	.00005	.00005
1.020	-0.22260	-0.04423	-0.00125	-0.00078
4.159	-0.04301	-0.04656	-0.00253	-0.00163
9.108	.69544	-0.04211	-0.00438	-0.00261
13.972	1.54134	-0.03945	-0.00532	-0.00278
19.090	1.68336	-0.04045	-0.00677	-0.00370
24.312	1.55390	.04352	-0.00699	-0.00335
GRADIENT	.12699	.00180	-0.00042	-0.00027

(ABX045) (29 MAR 74)

AMES 3.5-160 OAL18 (B10F4CSD7M3N8) (W87E18) (VSR5)

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
ELVN-R = .000 RUDDER = .000
SPDRK = 54.920 BDFLAP = -14.250
ELEVON = .000 AILRON = .000

REFERENCE DATA

SRZ = 2690.0000 56.17. XMRP = 1076.4800 IN.
LRZ = 474.6100 IN. YMRP = .0000 IN.
BRZ = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0190

RV/L = 1.82 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 10.290

ALPHA	L/D	CY	CYN	CBL
24.356	1.59636	-0.04959	-0.00661	-0.00619
27.392	1.47245	-0.03218	-0.00694	-0.00744
30.226	1.36314	-0.03353	-0.00773	-0.00816
34.130	1.22625	-0.04494	-0.00861	-0.00897
36.181	1.06980	-0.05600	-0.00932	-0.00911
42.426	.96041	-0.03326	-0.01145	-0.00869
GRADIENT	-0.03477	-0.00023	-0.00026	-0.00015

DATE 01 APR 74

TABLETED SOURCE DATA FOR QAL15 (ARC 3.5-180)

PAGE 94

REFERENCE DATA

XREF = 2890.0000 50.FT.
 LREF = 474.8100 IN.
 BREF = 936.8000 IN.
 SCALE = .0150

AVES 3.5-180 QAL18 (B10F4C507M3M8) (M87E18) (V5R5)

(ABX046) (29 MAR 74)

PARAMETRIC DATA

BETA = 5.000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BDFLAP = -14.250
 ELEVON = .000 AILRON = .000

RUN NO. O/ D RN/L = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.259	24.061	1.63720	-0.05999	-0.00584	-0.00723
5.259	27.125	1.51461	-0.06174	-0.00592	-0.00822
5.259	29.991	1.40083	-0.06067	-0.00711	-0.00848
5.258	33.912	1.25180	-0.06018	-0.00827	-0.00868
5.258	39.078	1.07554	-0.05957	-0.00948	-0.00897
5.258	43.035	.95405	-0.05655	-0.01143	-0.00823
5.258	47.200	.83954	-0.04950	-0.01251	-0.00737
5.258	51.156	.73416	-0.04370	-0.01206	-0.00455
	GRADIENT	-0.03343	.00057	-0.00027	.00007

REFERENCE DATA

XREF = 2890.0000 50.FT.
 LREF = 474.8100 IN.
 BREF = 936.8000 IN.
 SCALE = .0150

AVES 3.5-180 QAL18 (B10F4C507M3M8) (M87E18) (V5R5)

(ABX047) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BDFLAP = -14.250
 ELEVON = .000 AILRON = .000

RUN NO. O/ G RN/L = 2.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.257	24.401	1.61931	-0.01800	-0.00117	-0.00058
5.253	27.340	1.50537	-0.01970	-0.00097	-0.00083
5.258	30.081	1.39434	-0.02064	-0.00065	-0.00134
5.258	34.134	1.24470	-0.02064	-0.00137	-0.00127
5.258	39.102	1.07646	-0.02177	-0.00160	-0.00140
5.258	43.936	.93022	-0.02168	-0.00239	-0.00083
5.258	49.113	.79035	-0.02038	-0.00320	-0.00062
5.258	54.181	.66233	-0.02156	-0.00287	-0.00027
	GRADIENT	-0.03227	-0.00017	-0.00008	.00002

DATE 01 APR 74

TABULATED SOURCE DATA FOR QAL1B (ARC 3.5-160)

PAGE 55

AMES 3.5-160 QAL1B (810F4C5D7M3N6) (M87E16) (VSR5)

(ABX049) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4600 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELWN-L = -40.000
 ELWN-R = -40.000 RUDDER = .000
 SPDRK = 54.920 BDFLAP = -14.250
 ELEVON = -40.000 ATLON = .000

RUN NO. 0/0 RV/L = 1.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.258	26.160	1.43369	-.01946	-.00117	-.00109
5.258	32.112	1.29125	-.01922	-.00172	-.00102
5.258	35.165	1.18809	-.02008	-.00198	-.00109
5.258	36.061	1.09497	-.02057	-.00220	-.00130
5.258	40.966	1.00689	-.02136	-.00238	-.00109
5.257	43.936	.92136	-.02153	-.00272	-.00143
5.258	49.091	.78300	-.02105	-.00353	-.00072
5.258	54.136	.75724	-.02304	-.00361	-.00090
	GRADIENT	-.02977	-.00013	-.00010	-.00001

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.4600 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

AMES 3.5-160 QAL1B (810F4C5D7M3N6) (M87E16) (VSR5)

(ABX049) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 ELWN-L = 10.000
 ELWN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BDFLAP = 13.750
 ELEVON = 10.000 ATLON = .000

RUN NO. 0/0 RV/L = 1.90 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.258	24.466	1.55954	-.01893	-.00101	-.00039
5.259	27.404	1.44171	-.01997	-.00081	-.00071
5.259	30.148	1.33364	-.02035	-.00070	-.00102
5.258	34.143	1.18907	-.02009	-.00118	-.00101
5.258	39.140	1.02515	-.02032	-.00155	-.00114
5.258	43.973	.88769	-.01938	-.00263	-.00093
5.258	49.134	.75367	-.02029	-.00265	-.00002
5.258	54.192	.63077	-.01971	-.00307	-.00095
	GRADIENT	-.03123	-.00001	-.00009	-.00000

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 5.9-100)

PAGE 38

AMES 3.5-100 OA11B 1J10F4C5D7H3NB) (W07E10) (VSR5)

(ADXC090) (29 MAR 74)

REFERENCE DATA

S&P = 2990.0000 90.FT. XMRP = 1076.4800 IN.
L&P = 474.8100 IN. YMRP = .0000 IN.
B&P = 956.6900 IN. ZMRP = 400.0000 IN.
SCALE = .0150

PARAMETRIC DATA

BETA	=	.000	ELVN-L	=	.000
ELVN-R	=	.000	RUDDER	=	.000
SPOBRK	=	54.320	BDFLAP	=	-14.250
ELEVON	=	.000	AIRLON	=	.000

RUN NO. 0/0 RN/L = 1.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.250	-1.980	-7.7882	.00026	-.00003	-.00006
5.250	1.027	-.51221	-.00036	-.00018	-.00008
5.250	4.194	.46039	-.00163	-.00023	-.00005
5.250	7.181	1.06096	-.00179	-.00031	-.00005
5.250	10.026	1.53753	-.00235	-.00035	-.00001
5.250	12.949	1.62491	-.00353	-.00047	-.00002
5.250	16.033	1.63662	-.00527	-.00054	-.00007
5.250	21.179	1.74554	-.00839	-.00042	-.00014
5.250	24.190	1.82748	-.00770	-.00064	-.00031
	GRADIENT	.19119	-.00031	-.00003	-.00000

AMES 3.5-16N OA11B (B1U4C507M3N6) (W87E10) (V5R5)

(ABX1351) (29 MAR 74)

REFERENCE DATA

SEEF	=	2490.0000	92.47.	Y49P	=	1076.4000	IN.
LEEF	=	474.8100	IN.	Y49P	=	.1000	IN.
SEEF	=	936.6000	IN.	Z49P	=	400.0000	IN.
SCALE	=		.0150				

PARAMETRIC DATA

BETA	=	5.000	ELVN-L	=	.000
ELVN-R	=	.000	RUDDER	=	.000
SPOBRK	=	54.920	BOFLAP	=	-14.250
ELEVEN	=	.000	AILRON	=	.000

RM/L = 2.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.3217

ALPHA	L/D	CY	CYN	CEL
24.093	1.61799	-.05372	-.00696	-.00634
27.126	1.49696	-.05370	-.00732	-.00740
29.961	1.36402	-.05682	-.00610	-.00799
32.090	1.24260	-.05727	-.00941	-.00817
39.094	1.06710	-.05768	-.01066	-.00991
45.033	.94673	-.05464	-.01255	-.00861
47.133	.83407	-.05041	-.01265	-.00785
51.136	.72968	-.04653	-.01166	-.00556
GRADIENT	-.03299	.00022	-.00032	.00001

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

PAGE 57

AMES 3.5-160 OA11B (810F4C507M3M6) (M07E18) (VSR5)

(ABX052) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = 5.0000 IN.
 BREF = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RV/L = 1.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.339	1.62106	-.01470	-.00109	-.00066
27.264	1.50423	-.01667	-.00093	-.00096
30.005	1.39510	-.01627	-.00142	-.00085
34.068	1.23890	-.01731	-.00171	-.00065
37.981	1.10214	-.01790	-.00191	-.00064
43.780	.92743	-.01924	-.00218	-.00037
48.951	.79072	-.01959	-.00255	-.00011
52.946	.68933	-.01990	-.00281	-.00059
GRADIENT	-.03259	-.00017	-.00006	-.00002

PARAMETRIC DATA

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 RUDDER = .0000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .0000 AILRON = .0000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = 5.0000 IN.
 BREF = 936.6600 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RV/L = 1.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.237	1.56915	-.01507	-.00174	-.00012
27.250	1.46516	-.01627	-.00146	-.00063
29.967	1.36391	-.01636	-.00199	-.00055
34.009	1.21639	-.01708	-.00222	-.00057
36.967	1.05634	-.01833	-.00267	-.00026
43.841	.91580	-.01926	-.00303	-.00019
48.931	.78145	-.02043	-.00330	-.00013
52.917	.66409	-.02071	-.00355	-.00011
GRADIENT	-.03109	-.00020	-.00007	-.00002

PARAMETRIC DATA

BETA = .0000 ELVN-L = -40.0000
 ELVN-R = -40.0000 RUDDER = .0000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.0000 AILRON = .0000

AMES 3.5-160 OA11B (810F4C507M3M6) (M07E18) (VSR5)

(ABX055) (29 MAR 74)

DATE 31 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 56

AMES 3.5-160 OA118 (810F4C507M3N8) (M87E18) (VSR5)

(ABX054) (29 MAR 74)

REFERENCE DATA

SRCP = 2690.0000 54. FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRCP = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.303	1.60454	-.01541	-.00124	-.00056
27.222	1.46652	-.01732	.00093	-.00074
29.952	1.37767	-.01735	-.00136	-.00074
34.017	1.22331	-.01843	-.00182	-.00063
38.973	1.05479	-.01946	-.00190	-.00059
43.784	.91228	-.01942	-.00196	-.00050
48.956	.77414	-.02142	-.00217	-.00030
52.928	.67499	-.01678	-.00328	-.00099
GRADIENT	-.03251	-.00010	-.00006	-.00001

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 RUDDER = .0000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = .0000 AILRON = .0000

PARAMETRIC DATA

REFERENCE DATA

SRCP = 2690.0000 54. FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRCP = 936.6000 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RM/L = 1.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
27.226	1.47658	-.01532	-.00044	-.00046
29.952	1.37104	-.01486	-.00079	-.00047
34.026	1.21790	-.01616	-.00099	-.00048
39.039	1.03119	-.01787	-.00106	-.00078
GRADIENT	-.03662	-.00024	-.00005	-.00003

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 RUDDER = .0000
 SPDRK = 54.920 BOFLAP = 13.750
 ELEVON = .0000 AILRON = .0000

PARAMETRIC DATA

AMES 3.5-160 OA118 (810F4C507M3N8) (M87E18) (VSR5)

(ABX055) (29 MAR 74)

DATE 01 APR 74

ABX057 (29 MAR 74)

AMES 3.5-160 OAI1B (B10F4C507H3N8) (W87E18)

REFERENCE DATA

SREF = 2890.0000 50.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.351	1.62584	-.00793	-.00109	-.00103
27.313	1.51011	-.00874	-.00125	-.00070
30.031	1.39922	-.00920	-.00153	-.00079
36.963	1.07470	-.01036	-.00152	-.00087
43.606	.93000	-.01156	-.00175	-.00055
48.909	.79446	-.01209	-.00187	-.00024
52.864	.69334	-.01117	-.00163	-.00068
GRADIENT	-.03296	-.00013	-.00002	-.00002

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 BOFLAP = -14.250
 ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2890.0000 50.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

RN/L = 1.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.035	1.51476	-.01076	-.00180	.00019
27.084	1.43871	-.01159	-.00201	.00020
29.660	1.34986	-.01201	-.00226	.00019
33.919	1.21670	-.01263	-.00247	.00015
36.973	1.06134	-.01363	-.00269	.00014
43.637	.92500	-.01357	-.00293	.00012
48.993	.79226	-.01517	-.00303	.00012
52.955	.69496	-.01572	-.00303	.00012
GRADIENT	-.02892	-.00016	-.00004	-.00000

PARAMETRIC DATA

BETA = .000 BOFLAP = -14.250

ABX057 (29 MAR 74)

AMES 3.5-160 OAI1B (B10F4C507H3N8)

GATE 01 APR 74

TABULATED SOURCE DATA FOR Q4118 (ARC 3.5-160)

PAGE 80

AMES 3.5-160 Q4118 (810F4C507M3:5) (488E16) (V3R5)

(ABX058) (29 MAR 74)

REFERENCE DATA

SREF = 2890.0000 50.FT. XREF = 1076.4800 IN.
LREF = 474.8100 IN. YREF = .0000 IN.
BREF = 936.6800 IN. ZREF = 400.0000 IN.
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELWN-L = .000
ELWN-R = .000 RUDDER = .000
SPDRK = 54.920 BOFLAP = -14.250
ELEVON = .000 AILRON = .000

RM/L = 1.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.500	1.6047	-.01036	-.00120	-.00132
27.380	1.49582	-.01200	-.00093	-.00161
30.092	1.39111	-.01261	-.00149	-.00136
34.161	1.24117	-.01374	-.00172	-.00133
39.046	1.07629	-.01598	-.00159	-.00164
43.905	.93077	-.01725	-.00216	-.00165
49.041	.79482	-.01777	-.00227	-.00234
53.057	.69594	-.01787	-.00236	-.00174
GRADIENT	-.03199	-.00027	-.00005	-.00002

REFERENCE DATA

SREF = 2890.0000 50.FT. XREF = 1076.4800 IN.
LREF = 474.8100 IN. YREF = .0000 IN.
BREF = 936.6800 IN. ZREF = 400.0000 IN.
SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELWN-L = .000
ELWN-R = .000 RUDDER = .000
SPDRK = 54.920 BOFLAP = -14.250
ELEVON = .000 AILRON = .000

RM/L = 1.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-2.125	-.68125	-.00609	-.00008	-.00037
.909	-.28759	-.00774	-.00017	-.00061
4.089	.30311	-.00724	-.00019	-.00076
7.075	.63763	-.00749	-.00059	-.00061
9.901	1.26642	-.00742	-.00097	-.00087
13.997	1.65977	-.00759	-.00146	-.00062
17.866	1.74068	-.00698	-.00161	-.00099
21.006	1.69114	-.01014	-.00171	-.00105
24.064	1.59206	-.01200	-.00166	-.00122
GRADIENT	.15603	.00014	-.00002	-.00006

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

(ABX060) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 BDFLAP = -14.250

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4000 IN.
LREF = 474.6100 IN. YMRP = .0000 IN.
BREF = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RN/L = 1.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-2.159	-.72565	-.00407	-.00153	.00006
.658	-.51338	-.00429	-.00154	.00001
3.964	-.21395	-.00475	-.00161	.00014
7.026	.16883	-.00541	-.00161	.00021
9.944	.61768	-.00559	-.00162	.00023
13.644	1.16620	-.00567	-.00158	.00018
17.928	1.45860	-.00581	-.00153	.00016
21.035	1.51068	-.00580	-.00170	.00019
24.100	1.47555	-.00556	-.00167	.00015
GRADIENT	.06928	-.00011	-.00001	.00001

(ABX061) (29 MAR 74)

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 BDFLAP = -14.250
ELEVON = .000 AILRON = .000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4000 IN.
LREF = 474.6100 IN. YMRP = .0000 IN.
BREF = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RN/L = 1.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
-2.161	-.76270	-.00567	-.00098	.00040
.666	-.30643	-.00560	-.00083	.00017
3.962	.25323	-.00538	-.00103	.00000
7.077	.89538	-.00613	-.00106	-.00016
9.942	1.36990	-.00672	-.00113	-.00036
13.901	1.74728	-.00620	-.00118	-.00067
17.934	1.80012	-.00978	-.00116	-.00125
21.033	1.72758	-.01116	-.00121	-.00171
24.075	1.61876	-.01220	-.00122	-.00206
GRADIENT	.16631	-.00005	-.00001	-.00006

DATE 01 APR 74

TABULATED SOURCE DATA FOR Q4118 (ARC 3.5-160)

PAGE 62

AMES 3.5-160 Q4118 (B10F4C5D7 N6 (M07E16) (VSR5)

(ABX062) (29 MAR 74)

REFERENCE DATA

SACF = 2990.0000 50.FT. YMRP = 1076.4800 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BACF = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RM/L = 1.96 GRADIENT INTERVAL = -5.00/ 5.00

MACH = 7.320

ALPHA	L/D	CY	CYN	CBL
24.361	1.62836	-.00941	-.00010	-.00037
27.318	1.50557	-.01063	-.00000	-.00032
30.020	1.39358	-.01119	-.00014	-.00030
34.121	1.23953	-.01234	-.00026	-.00046
39.051	1.07217	-.01356	-.00048	-.00026
43.646	.92967	-.01392	-.00084	-.00043
49.624	.77491	-.01666	-.00096	-.00010
52.922	.69066	-.01430	-.00162	-.00056
GRADIENT	-.03267	-.00021	-.00005	.00000

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 RUDDER = .000
SPDRK = 54.920 ROFLAP = -14.290
ELEVON = .000 AILRON = .000

REFERENCE DATA

SACF = 2990.0000 50.FT. YMRP = 1076.4800 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BACF = 936.6800 IN. ZMRP = 400.0000 IN.
SCALE = .0150

RUN NO. 0/ 0 RM/L = 1.67 GRADIENT INTERVAL = -5.00/ 5.00

ALPHA	L/D	CY	CYN	CBL
5.256	27.255	-.01503	.00034	-.00047
5.256	29.946	-.01544	.00056	-.00056
5.256	34.056	-.01592	.00039	-.00066
5.256	36.996	-.01603	.00032	-.00156
5.256	43.642	-.01775	-.00001	-.00141
5.256	49.025	-.01720	-.00048	-.00203
5.256	54.105	-.01645	-.00063	-.00297
GRADIENT	-.03179	-.00013	-.00004	-.00008

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
ELVN-R = .000 RUDDER = .000
SPDRK = 54.920 ROFLAP = .000
ELEVON = .000 AILRON = .000

AMES 3.5-160 Q4118 (B10F4C5D7M3N6) (M07E16) (VSR5)

(ABX063) (29 MAR 74)

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA118 (ARC 3.5-160)

PAGE 63

AMES 3.5-160 OA118 (810F4C507M3N6) (M87E18) (VSR5)

(ABX064) (29 MAR 74)

REFERENCE DATA

SRCT = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRCT = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0131

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPDRK = 54.920 BDFLAP = 13.750
 ELEVON = .000 AILRON = .000

RUN NO. 0/ 0 RN/L = 1.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.257	24.329	1.60437	-.01373	.00036	-.00029
5.257	27.297	1.48511	-.01438	.00043	-.00036
5.257	29.978	1.37825	-.01469	.00058	-.00048
5.257	34.031	1.22717	-.01500	.00030	-.00048
5.257	38.981	1.06012	-.01562	.00012	-.00013
5.257	43.851	.91269	-.01623	.00007	-.00038
5.257	49.041	.77648	-.01657	-.00035	-.00121
5.257	54.097	.65179	-.01748	-.00028	-.00044
	GRADIENT	-.03210	-.00012	-.00003	-.00001

REFERENCE DATA

SRCT = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BRCT = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = 10.000
 ELVN-R = 10.000 RUDDER = .000
 SPDRK = 54.920 BDFLAP = 13.750
 ELEVON = 10.000 AILRON = .000

AMES 3.5-160 OA118 (810F4C507M3N6) (M87E18) (VSR5)

(ABX065) (29 MAR 74)

RUN NO. 0/ 0 RN/L = 1.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.258	-2.054	-.55841	-.00433	.00065	-.00056
5.258	1.046	-.00772	-.00533	.00043	-.00072
5.258	4.091	.64430	-.00540	.00036	-.00094
5.258	7.137	1.24779	-.00573	.00018	-.00106
5.257	10.077	1.64016	-.00624	.00005	-.00108
5.257	13.965	1.84433	-.00774	-.00004	-.00128
5.257	18.003	1.60555	-.00869	-.00003	-.00145
5.257	21.110	1.69661	-.01006	.00017	-.00155
5.257	24.187	1.56649	-.01121	.00003	-.00141
5.257	28.204	1.40255	-.01345	.00030	-.00146
5.257	31.155	1.28869	-.01413	.00035	-.00148
	GRADIENT	.19567	-.00017	-.00005	-.00006

DATE 01 APR 74

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-107)

PAGE 84

AVES 3.5-160 OA11B (B10F4C507M3M8) (M87E18) (V9R5)

(ABJO66) (29 MAR 74)

REFERENCE DATA

8827 = 2990.0000 50. FT. 1000P = 1076.4800 IN.
 1000P = 474.8100 IN. 1000P = .0000 IN.
 8827 = 936.6800 IN. 2000P = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = -40.000
 ELVN-R = -40.000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = -40.000 ATLON = .000

RUN NO. 0/0 RN/L = 2.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.256	-2.564	-9.7669	-.00233	-.00054	-.00015
5.257	.441	-.56670	-.00372	-.00046	-.00030
5.257	.533	.00498	-.00483	-.00745	-.00028
5.256	6.585	.65984	-.00513	-.00272	-.00031
5.256	9.486	1.19501	-.00576	-.01101	-.00034
5.256	13.360	1.64155	-.00739	-.00594	-.00029
5.256	19.560	1.72685	-.00962	-.00111	-.00013
5.256	23.574	1.61112	-.01103	-.00125	-.00031
5.256	26.540	1.50012	-.01216	-.00123	-.00047
5.256	30.437	1.35156	-.01373	-.00103	-.00075
	GRADIENT	.16113	-.00041	-.00001	-.00002

REFERENCE DATA

8827 = 2990.0000 50. FT. 1000P = 1076.4800 IN.
 1000P = 474.8100 IN. 1000P = .0000 IN.
 8827 = 936.6800 IN. 2000P = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .000 ELVN-L = .000
 ELVN-R = .000 RUDDER = .000
 SPOBRK = 54.920 BOFLAP = -14.250
 ELEVON = .000 ATLON = .000

AVES 3.5-160 OA11B (B10F4C507M3M8) (M87E18) (V9R5)

(ABJO67) (29 MAR 74)

RUN NO. 0/0 RN/L = 2.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.257	10.765	1.61505	.00063	.00015	-.00006
5.257	15.929	1.67750	-.00133	.00040	-.00015
5.256	18.755	1.64207	-.00267	.00043	-.00030
5.256	21.573	1.74825	-.00364	.00050	-.00026
5.256	24.579	1.62594	-.00501	.00059	-.00032
5.256	27.668	1.49576	-.00573	.00060	-.00032
5.256	30.750	1.36885	-.00740	.00079	-.00039
5.256	35.734	1.16448	-.00922	.00090	-.00014
5.255	40.683	1.02415	-.01216	.00077	-.00046
	GRADIENT	-.02662	-.00042	.00002	-.00001

TABULATED SOURCE DATA FOR OA11B (ARC 3.5-160)

(ABX068) (29 MAR 74)

AMES 3.5-160 OA11B (B10F4CSD7M3N0) (M07E18) (V0R5)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 RUDDER = .0000
 SPDBRK = 54.920 BDFLAP = -14.250
 ELEVON = .0000 AILRON = .0000

RUN NO. 0/ 0 RN/L = 2.16 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.257	-9.360	-1.16257	-.01631	.00073	.00008
5.257	-6.287	-1.03710	-.01546	.00025	-.00010
5.257	-2.250	-.69386	-.01536	-.00002	-.00034
5.256	.615	-.25367	-.01526	.00001	-.00068
5.256	3.577	.35330	-.01479	.00004	-.00101
5.256	6.699	.98978	-.01407	-.00026	-.00119
5.256	9.784	1.48489	-.01371	-.00028	-.00131
5.256	12.695	1.74590	-.01392	-.00041	-.00139
5.256	15.748	1.82485	-.01406	-.00062	-.00172
5.256	18.724	1.79085	-.01497	-.00080	-.00203
	GRADIENT	.17985	.00010	.00001	-.00012

AMES 3.5-160 OA11B (B10F4CSD7M3N0) (M07E18) (V0R5)

(ABX069) (29 MAR 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.4800 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 400.0000 IN.
 SCALE = .0150

PARAMETRIC DATA

BETA = .0000 ELVN-L = .0000
 ELVN-R = .0000 RUDDER = .0000
 SPDBRK = 54.920 BDFLAP = -14.250
 ELEVON = .0000 AILRON = .0000

RUN NO. 0/ 0 RN/L = 2.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	L/D	CY	CYN	CBL
5.267	-9.388	-1.16651	-.01666	.00088	.00005
5.267	-6.290	-1.04734	-.01577	.00038	-.00010
5.266	-2.251	-.70812	-.01536	.00022	-.00037
5.265	.628	-.26345	-.01519	.00018	-.00073
5.264	3.547	.35172	-.01476	.00019	-.00108
5.262	6.702	.97200	-.01391	-.00023	-.00127
5.260	9.782	1.46627	-.01366	-.00042	-.00134
5.258	12.688	1.72969	-.01378	-.00054	-.00142
5.256	15.738	1.81585	-.01419	-.00076	-.00163
5.254	18.756	1.78328	-.01508	-.00095	-.00196
	GRADIENT	.17914	.00011	-.00001	-.00012